

**Curriculum Vitae**  
**Gail E. Gasparich**

**Address:**

Home:  
3202 Halcyon Court  
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Towson University  
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**Education:**

B.S. (Biology)	The College of William and Mary, Williamsburg, VA (1984).
Ph.D. (Microbiology)	The Pennsylvania State University, Dissertation: The Effects of Various Environmental Stress Conditions on Gene Expression in the cyanobacteria <i>Synechococcus</i> sp. PCC 7002. University Park, PA (1989) Advisor: Dr. Donald A. Bryant.

**Academic and Professional Experience:**

1984-1987	Teaching Assistantship, Department of Molecular and Cell Biology, The Pennsylvania State University.
1987-1989	Research Assistantship, Department of Molecular and Cell Biology, The Pennsylvania State University
1989-1990	Research Associate, Plant-Microbe Interactions Laboratory of the Biotechnology Center, The Ohio State University
1990-1996	Research Associate, Insect Biocontrol Laboratory and Systematic Entomology Laboratory, USDA, ARS, Beltsville, MD
1990-1991	Laboratoire de Biologie Cellulaire et Moléculaire, INRA, Bordeaux, France. (detailed for one year while at USDA)
1995-1996	Adjunct Assistant Professor, Northern Virginia Community College--Annandale Campus--Taught General Biology
1996-2001	Assistant Professor, Biology Department, Towson University Towson, MD
2001-2006	Associate Professor, Biology Department, Towson University Towson, MD
2006-2010	Professor, Biology Department, Towson University, Towson, MD
2010-present	Associate Dean, Jess and Mildred Fisher College of Science and Mathematics, Towson University, Towson, MD

**Professional Associations:**

American Association for the Advancement of Science  
American Society of Microbiology  
Association for Women in Science  
International Society of Mycoplasmaology  
National Science Teachers Association  
National Biology Teachers Association  
National Council for Undergraduate Research  
Sigma Xi-Towson Chapter

**Honors and Awards:**

1991	USDA Certificate of Merit, Citation for Special Service in Developing Spiroplasma Transformation Systems while detailed to INRA, Bordeaux, France.
1992	USDA Certificate of Merit, Citation for Outstanding Performance in Developing Genetically Engineered Spiroplasmas for Biocontrol.
1995	USDA Certificate of Merit, Citation for Outstanding Performance
2001	SGA Teacher of the Year Award—Towson University
2002	Outstanding Faculty Award, College of Science and Mathematics—Towson University
2004	Richard L. Hilton, Jr. Outstanding Service Award—Department of Biological Sciences, Towson University
2005	Governor's Citation for Outstanding Work for Gifted Students in the State of Maryland—awarded to all Maryland State Department of Education Summer Center Program Directors
2005	Towson University Million Dollar Club (to individuals bringing in over a million dollars in grants) presented by the College of Graduate Education and Research
2005	Invited to Celebration for "Towson's Scholar-Athletes and the Faculty Who Inspire Them" by Christina Grempler
2005	Nominated to Towson's Elite Faculty (selected by Dean Gerald Intemann and sponsored by the Student Government Association)
2005	Outstanding Honors College Faculty Award (selected by graduating seniors)
2005	Fisher College of Science and Mathematics University and Professional Service Award

- 2006 University System of Maryland Board of Regents' Award for Excellence in Teaching.
- 2009 College of Graduate Studies and Research Award in Recognition and Appreciation of Exceptional Success in Securing Ongoing Federal Funding to Support Student Success

**Invited Talks:**

- 1990 "The Effect of Various Environmental Stress Conditions on the Cyanobacterium, *Synechococcus* sp. PCC 7002." Ohio State University, Ohio State University Biotechnology Seminar, Columbus, OH.
- 1991 "The use of spiroplasmas in insect biocontrol." Women in Science Seminar. Thomas Jefferson High School of Biotechnology.
- 1991 "Spiroplasmas as potential biocontrol agents." INRA Laboratoire de Cellulaire and Moleculaire Biologie, Bordeaux, France.
- 1991 "Occurrence of Extrachromosomal DNA in Spiroplasmas Associated with Plants and Insects." ASM 91st General Meeting, Dallas, TX.
- 1992 "Transfection and Transformation Efficiency in Spiroplasmas." International Organization of Mycoplasma Meeting, Ames, Iowa.
- 1992 "Occurrence of Extrachromosomal DNAs in Spiroplasmas Associated with Plants, Insects and Ticks." International Organization of Mycoplasma Meeting, Ames, Iowa.
- 1993 "Progress in Development of a Novel Toxin Delivery System for Biocontrol of the Colorado Potato Beetle." Entomological Society of America, Eastern Branch Meeting. Williamsburg, VA.
- 1993 "Cyanobacteria and Spiroplasmas: Unique Study Systems for Molecular Biology." Lynchburg College, Lynchburg, VA.
- 1993 "Progress in Developing Insect Spiroplasma Transformation Systems." ASM 93rd General Meeting, Atlanta, GA.
- 1993 "Progress in Development of Spiroplasmas as Insect Biocontrol Agents." George Mason University. Fairfax, VA.
- 1994 "Spiroplasmas: Unique Microorganisms with Insect Biocontrol Potential." The Penn State University-Worthington Scranton Campus. Scranton, PA.
- 1994 "Development of Spiroplasmas as Insect Biocontrol Agents." Miami University. Oxford, OH.
- 1994 "Spiroplasmas: Microorganisms with Insect Biocontrol Potential." Ursinus College. Collegeville, PA.

- 1995 "Spiroplasma Molecular Biology and Systematics." College of the Holy Cross. Worcester, MA.
- 1995 "Spiroplasmas: Unique Microorganisms." Bridgewater College, Bridgewater, VA.
- 1995 "Spiroplasmas: Genetic Engineering and Diversity." Virginia Tech Blacksburg, VA.
- 1996 "Spiroplasmas for use as biocontrol agents." Fairfield University, Fairfield, CT.
- 1996 "Spiroplasmas: A diverse group of microorganisms." Miami University, Oxford, OH.
- 1996 "Spiroplasmas: molecular biology and systematics." Towson State University. Towson, MD.
- 1997 "Spiroplasmas: taxonomy and their potential as biocontrol agents." Towson Chapter of the Sigma Xi, Towson University. Towson, MD.
- 1998 "Increasing Minority Student Retention at Towson University Through Research" at Retention 2000: "Student Self Empowerment: Becoming Stake-Holders in the Next Millennium" with Drs. David Schaefer and Daniel Wubah at University of Maryland at College Park.
- 1999 "Science, Technology and Society Panel" January Conference at Towson University on "General Education: The Foundation of a Towson Education."
- 1999 "Ensuring the Success of All Students" Project Kaleidoscope 10<sup>th</sup> Anniversary Meeting at University of Maryland at College Park,
- 1999 "Recruitment and retention of minority students through research" with Drs. Daniel Wubah and David Scheafer at Towson University.
- 1999 "Faculty as Leaders in Curricular Reform: Science Literacy through General Education and Posing Relevant Questions" Panel Presentation for Project Kaleidoscope Regional Meeting on Leadership at Towson University.
- 1999 "Women and Science" Women's Studies Colloquium with Dr. Paz Galupo at Towson University.
- 1999 "Crime and Privacy: The Urban Impact of DNA Databases as a Tool in Law Enforcement" at the Society for Philosophy and Geography Conference at Towson University.
- 2000 "Pedagogical Strategies to Present Gender/Racial Bias in the Sciences" with Dr. Paz Galupo at the Lilly-Atlantic 2000 at Towson University.
- 2000 "Women Scientists in Academia" Panel at the Women and Science Conference at Worcester State College.

- 2000 “Gender Sensitive Strategies to Improve Learning” Panel at the Women in Science Forum at Towson University.
- 2000 “Spiroplasma Taxonomy, Phylogeny and Pathogenicity” Session in the Mycoplasma Genomics and Pathogenicity at the Annual Meeting of the American Society of Microbiology in Los Angeles, CA.
- 2001 “Females in Science” Maryland State Conference on Gifted and Talented Education in Ellicott City, MD.
- 2001 “Who Besides Marie Curie?” American Association for University Women—Towson Chapter in Towson, MD.
- 2005 “Women in Science and Technology Careers” Maryland Association of Affirmative Action Officers in Sparks, MD at McCormick Corporate Headquarters.
- 2006 “Spiroplasma: Evolution, Adaptation and Diversity” Department of Veterinary Science and Microbiology, University of Arizona, Tucson, AZ.
- 2007 “Spiroplasma: Diversity, Evolution and Potential Application as Biocontrol Agents” Teaching and Learning Fair at CCBC, Dundalk, MD.
- 2009 “STEM Career Paths” Community Colleges of Baltimore County, Essex, MD.

### **Publications:**

Cho, S., **G. Gasparich**, S. Sledjeski, C. Ezzell and C. Vermeulen. 1984. The realm of the steady state in *Escherichia coli*. *Biochem. Biophys. Res. Comm.* 124(2):625-628.

Bryant, D. A., R. de Lorimier, G. Guglielmi, V. L. Stirewalt, J. M. Dubbs, B. Illman, **G. Gasparich**, J. S. Buzby, A. Cantrell, R. C. Murphy, J. Gingrich, R. D. Porter and S. E. Stevens, Jr. 1986. The cyanobacterial photosynthetic apparatus: a molecular genetic analysis. *In* *Transduction: Genetics, Structure and Function*. Cold Spring Harbor Laboratory, Cold Spring Harbor.

**Gasparich, G. E.**, J. Buzby, D. A. Bryant, R. D. Porter and S. E. Stevens, Jr. 1987. The effects of light intensity and nitrogen starvation on the phycocyanin promoter in the cyanobacterium *Synechococcus* sp. PCC 7002. *In* J. Biggins (ed.) *Progress in Photosynthesis Research. Proceedings of the VIIth International Congress of Photosynthesis*, Providence, Rhode Island. VI:761-764.

**Gasparich, G. E.**, and D. A. Bryant. 1988. Regulation of phycocyanin expression in *Synechococcus* sp. PCC 7002. *In* S. E. Stevens, Jr. and D. A. Bryant (eds.). *Light-energy transduction in photosynthesis: Higher plant and bacterial models*. Proc. 3rd Annu. Penn State Symp. in Plant Physiol. pp. 337-339.

Bryant, D. A., E. Rhiel, R. de Lorimier, J. Zhou, V. L. Stirewalt, **G. E. Gasparich**, J. M. Dubbs and W. Snyder. 1989. Analysis of phycobilisome and photosystem I complexes of cyanobacteria. *Proceedings of the VIIIth International Congress of Photosynthesis*, Stockholm, Sweden.

- Murphy, R. C., **G. E. Gasparich**, D. A. Bryant and R. D. Porter. 1990. Nucleotide sequence and further characterization of the *Synechococcus* sp. PCC 7002 *recA* gene: complementation of a cyanobacterial *recA* mutation by the *E. coli recA* gene. *J. Bacteriol.* 172(2):967-976.
- Gingrich, J. C., **G. E. Gasparich**, K. Sauer and D. A. Bryant. 1990. Nucleotide sequence and expression of the two genes encoding D2 protein and the single gene encoding the CP43 protein for photosystem II in the cyanobacterium *Synechococcus* sp. PCC 7002. *Photosyn. Res.* 24:137-150.
- Rhiel, E., V. L. Stirewalt, **G. E. Gasparich** and D. A. Bryant. 1992. The *psaC* genes of *Synechococcus* sp. PCC 7002 and *Cyanophora paradoxa*: cloning and sequence analysis. *Gene* 112:123-128.
- Zhou, J., **G. E. Gasparich**, V. L. Stirewalt, R. de Lorimier, and D. A. Bryant. 1992. The *cpcE* and *cpcF* genes of *Synechococcus* sp. PCC 7002: construction and phenotypic characterization of interposon mutants. *J. Biol. Chem.* 267:16138-16145.
- Hackett, K. J., R. B. Henegar, R. F. Whitcomb, D. W. Lynn, M. Konai, R. F. Schroder, **G. E. Gasparich**, J. L. Vaughn, and W. W. Cantelo. 1992. Distribution and biological control significance of Colorado Potato Beetle Spiroplasmas in North America. *Biol. Control.* 2:218-225.
- Gasparich, G. E.**, K. J. Hackett, E. A. Clark, J. Renaudin, and R. F. Whitcomb. 1993. Occurrence of extrachromosomal deoxyribonucleic acids in spiroplasmas associated with plants, insects and ticks. *Plasmid* 29:81-93.
- Hackett, K. J. and **G. E. Gasparich**. 1993. Progress in the development of a novel toxin delivery system for biocontrol of the Colorado potato beetle. *Proceedings of the Agricultural Research Service Cooperators Meeting: Colorado Potato Beetle and Aphids Research.* pp.24-26.
- Gasparich, G. E.**, C. Stamburski, J. Renaudin, J. M. Bové and K. J. Hackett. 1993. Optimization of transfection efficiencies in *Spiroplasma citri* R8A2 RF using a variety of methods. *Plasmid.* 29:193-205.
- Gasparich, G. E.**, E. A. Clark, C. Saillard, F. E. French, J. G. Tully, K. J. Hackett and R. F. Whitcomb. 1993. Serological and genomic relatedness of group VIII and group XVII spiroplasmas. *Int. J. Syst. Bacteriol.* 43:338-341.
- McPheron, B. A., **G. E. Gasparich**, H.-Y. Han, G. J. Steck, and W. S. Sheppard. 1994. Mitochondrial DNA restriction map for the Mediterranean Fruit Fly, *Ceratitidis capitata*. *Biochem. Gen.* 32:25-33.
- Gasparich, G. E.** and K. J. Hackett. 1994. Characterization of a cryptic plasmid isolated from the mollicute *Spiroplasma taiwanense*. *Plasmid.* 32:342-343.
- Gasparich, G. E.**, W. S. Sheppard, H.-Y. Han, B. A. McPheron, and G. J. Steck. 1995. Analysis of mitochondrial DNA and development of PCR-based diagnostic molecular markers for Mediterranean Fruit Fly (*C. capitata*) populations. *Insect Molecular Biology.* 4:61-67.

Dybvig, K., **G. E. Gasparich**, and K. W. King. 1995. Artificial transformation of mollicutes via polyethylene glycol- and electroporation-mediated protocols. In "Molecular and Diagnostic Procedures in Mycoplasmaology." S. Razin and J. G. Tully, Eds. pp. 179-184. Academic Press, San Diego, CA.

Konai, M., K. J. Hackett, D. L. Williamson, J. J. Lipa, J.D. Pollack, **G. E. Gasparich**, E. A. Clark, D. C. Vacek, and R. F. Whitcomb. 1996. Improved Cultivation systems for isolation of Colorado Potato Beetle *Spiroplasma*. *Appl. Environ. Microbiol.* 62:3453-3458.

Hackett, K. J., R. F. Whitcomb, T. B. Clark, R. B. Henegar, D. E. Lynn, A. G. Wagner, J. G. Tully, **G. E. Gasparich**, D. L. Rose, P. Carle, J. M. Bove, M. Konai, E. A. Clark, J. R. Adams, and D. L. Williamson. 1996. *Spiroplasma leptinotarsae* sp. nov., a mollicute uniquely adapted to its host, the Colorado Potato Beetle, *Leptinotarsa decemlineata* (Coleoptera: Chrysomelidae). *Int. J. Syst. Bacteriol.* 46:906-911.

Hackett, K. J., R. F. Whitcomb, F. E. French, J. G. Tully, **G. E. Gasparich**, D. L. Rose, P. Carle, J. M. Bove, R. B. Henegar, T. B. Clark, M. Konai, E. A. Clark, D. L. Williamson. 1996. *Spiroplasma corruscae* sp. nov., from a firefly beetle (Coleoptera: Lampyridae) and tabanid flies (Diptera: Tabanidae). *Int. J. Syst. Bacteriol.* 46:947-950.

Whitcomb, R. F., **G. E. Gasparich**, F. E. French, J. G. Tully, D. L. Rose, P. Carle, J. M. Bove, R. B. Henegar, M. Konai, K. J. Hackett, J. Adams, T. B. Clark, and D. L. Williamson. 1996. *Spiroplasma syrphidocola* sp. nov., from a syrphid fly (Diptera: Syrphidae). *Int. J. Syst. Bacteriol.* 46:797-801.

Whitcomb, R. F., F. E. French, J. G. Tully, **G. E. Gasparich**, D. L. Rose, P. Carle, J. M. Bove, R. B. Henegar, M. Konai, K. J. Hackett, J. Adams, T. B. Clark, D. L. Williamson. 1997. *Spiroplasma chrysopicola* sp. nov., *Spiroplasma gladiatoris* sp. nov., *Spiroplasma helicoides* sp. nov. and *Spiroplasma tabanidicola* sp. nov., from Tabanid (Diptera: Tabanidae) flies. *Int. J. Syst. Bacteriol.* 47:713-719

Hackett, K. J., J. J. Lipa, **G. E. Gasparich**, D. E. Lynn, M. Konai, M. Camp, R. F. Whitcomb. 1997. The *Spiroplasma* motility inhibition test, a new method for determining intraspecific variation among Colorado Potato Beetle *Spiroplasmas*. *Int. J. Syst. Bacteriol.* 47:33-37.

French, F. E., R. F. Whitcomb, J. G. Tully, P. Carle, J. M. Bove, R. B. Henegar, J. R. Adams, **G. E. Gasparich**, and D. L. Williamson. 1997. *Spiroplasma lineolae* sp. nov., from the Horsefly *Tabanus lineola* (Diptera: Tabanidae). *Int. J. Syst. Bacteriol.* 47:1078-1081.

**Gasparich, G. E.**, J. G. Silva, H.-Y. Han, B. A. McPherson, G. J. Steck, and W. S. Sheppard. 1997. Population Genetic Structure of Mediterranean fruit fly (Diptera: Tephritidae) and Implications for worldwide colonization patterns. *Annals. Ent. Soc.* 90:790-797.

D. L. Williamson, R. F. Whitcomb, J. G. Tully, **G. E. Gasparich**, D. L. Rose, P. Carle, J. M. Bove, K. J. Hackett, J. Adams, R. B. Henegar, M. Konai, C. Chastel, and F. E. French. 1998. Revised Group Classification of the Genus *Spiroplasma*. *Int. J. Syst. Bacteriol.* 48:1-12.

**Gasparich, G.E.**, K. J. Hackett, F. E. French, and R. F. Whitcomb. 1998. Serologic and Genomic Relatedness of Group XIV *Spiroplasma* Isolates from a Lampyrid Beetle and Tabanid Flies: A Taxonomic and Ecological Paradox. *Int. J. Syst. Bacteriol.* 48:321-324.

Whitcomb, R. F., D. L. Williamson, **G. E. Gasparich**, J. G. Tully, F. E. French. 1999. Spiroplasma Taxonomy. Proc. First Internet Conference on Phytopathogenic Mollicutes. URL: <http://www.uniud.it/phytoplasma/conf.html>.

**G. E. Gasparich**. 1999. Current Taxonomy of Spiroplasma and Phytoplasmas. IOM Newsletter. 23:4-9.

M. P. Galupo and **G. E. Gasparich**. 2000. Women in Science: Integrating Gender Issues with UG Science Curricula. J. College Science Teaching XXIX:279-282.

D. A. Wubah, **G. E. Gasparich**, D. Schaefer, D. F. Brakke, G. McDonald, and D. Downey. 2000. Retention of Minority Students through Research. Council of UG Research Quarterly. March:120-126.

M. Frana, **Gasparich, G.E.**, and W. Grogan, Jr. 2001. First Isolation of a *Spiroplasma* (Mollicutes: Spiroplasmataceae) from biting midges (Diptera: Ceratopogonidae). Entomological News 112:64-70.

**G. E. Gasparich**, L. Cole, and R. Bell. 2001. "Who Besides Marie Curie?" Science Scope 24:49-51.

**Gail E. Gasparich** and M. Paz Galupo. 2001. Science autobiographies: What non-science majors tell us about science education. Academic Exchange. Summer: 176-180.

Meixner, M. D., B. A. McPheron, J. G. Silva, **G. E. Gasparich**, and W. S. Sheppard. 2002. The Mediterranean fruit fly in California: evidence for multiple introductions and persistent populations based on microsatellite and mitochondrial DNA variability. Molec. Ecol. 11:891-899.

**Gail E. Gasparich**. March, 2002. Spiroplasma: evolution, adaptation and diversity. Frontiers in Bioscience. 7:619-640. (Invited Review Article)

**Gail E. Gasparich**, R. F. Whitcomb, Deborah Dodge, Frank E. French, John Glass, and D. L. Williamson. 2004. The genus *Spiroplasma* and its nonhelical descendants: phylogenetic classification, correlation with phenotype, and roots of the *Mycoplasma mycoides* clade. Int. J. Syst. Evol. Micro. 54:893-915.

W. Wang, B. Wen, **G. E. Gasparich**, N. Zhu, L. Rong, J. Chen and Z. Xu. 2004. A spiroplasma associated with tremor disease in the Chinese mitten crab (*Eriocheir sinensis*). Microbiology 150:3035-3040

M. P. Galupo and **G. E. Gasparich**. 2004. Women in Science: Integrating Gender Issues with UG Science Curricula. J. College Science Teaching XXIX (4):279-282. Reprinted in NSELA Navigator. Fall, 2004, 41 (2):4-7, and 14. (original publication in 2000)

R. Thomas Koerber (UG student), **Gail E. Gasparich**, Mark F. Frana, and William L. Grogan, Jr. 2005. *Spiroplasma atrichopogon* sp. no. (Mollicutes: Entomoplasmatales: Spiroplasmataceae), from a biting midge (Diptera: Ceratopogonidae). International Journal of Systematic and Evolutionary Microbiology. 55:289-292.

L. M. Nunan, D. V. Lightner, M. Oduori and **G. E. Gasparich**. 2005. *Spiroplasma penaei* sp. nov., associated with mortalities in *Penaeus vannamei*, Pacific white shrimp. Int J Syst Evol Microbiol. 55: 2317-2322.

M. A. Oduori, J. J. Lipa and **G. E. Gasparich**. 2005. *Spiroplasma leucomae* sp. nov. isolated in Poland from white satin moth (*Leucoma salicis* L.) larvae. Int J Syst Evol Microbiol ; 55: 2447-2450.

I. Alexeeva, E. J. Elliott, S. Rollins, **G. E. Gasparich**, J. Lazar, and R. G. Rohwer. 2006. Absence of *Spiroplasma* or other bacterial 16S rRNA genes in brain tissue of Hamsters with scrapie. Journal of Clinical Microbiology 44:91-97.

Regassa, Laura B. and **Gail E. Gasparich**. 2006. Spiroplasmas: Evolutionary Relationships and Biodiversity. Frontiers in Bioscience. 11:2983-3002. (September 1, 2006)

Whitcomb, R. F., J. G. Tully, **G. E. Gasparich**, L. B. Regassa, D. L. Williamson and F. E. French. 2007. *Spiroplasma* species in the Cost Rican highlands: implications for biogeography and biodiversity. Biodiversity and Conservation. 16:3877-3894.

**Gasparich, G.E.** 2009. Facilitating seamless transitions from two-year to four-year institutions. In "Broadening Participation in Undergraduate Research: Fostering Excellence and Enhancing the Impact." M. K. Boyd and J. L. Wesemann, Eds. pp. 331-333. Council on Undergraduate Research, Washington, DC.

Regassa, L. B., A. C. Murphy, A. B. Zarzuela, H. L., Jandhyam, D. S. Bostick, C. R. Bates, **G. E. Gasparich**, R. F. Whitcomb and F.E. French. 2009. An Australian environmental survey reveals moderate *Spiroplasma* biodiversity: characterization of four new serogroups and a continental variant. Canadian Journal of Microbiology. 55:1347-1354.

**Gasparich, G.E.** 2010. Spiroplasmas and Phytoplasmas: Microbes associated with plant hosts. Biologicals. 38:193-203.

Williamson, D. L., **G. E. Gasparich**, L. B. Regassa, C. Saillard, J. Renaudin, J. M. Bove, and R. F. Whitcomb. 2010. Family II. Spiroplasmataceae Skripal 1983, 408<sup>VP</sup>. In "Bergey's Manual of systematic Bacteriology 2<sup>nd</sup> Ed., Vol. 4: The Bacteroidetes, Spirochaetes, Tenericutes (Mollicutes), Acidobacteria, Fibrobacteres, Fusobacteria, Dictyoglomi, Gemmatimonadetes, Lentisphaerae, Verrucomicrobia, Chlamydiae, and Planctomycetes." N. R. Krieg, J. T. Staley, B. Hedlund, B. J. Paster, N. Ward, W. Ludwig and W. B. Whitman, Eds. Submitted.

### Conference Poster Presentations:

Fifth Summer Symposium in Molecular Biology. July, 1986. The effect of nitrogen starvation on phycocyanin expression in the cyanobacterium, *Synechococcus* sp. PCC7002. The Pennsylvania State University.

VIIth International Congress on Photosynthesis. August, 1986. The effect of light intensity and nitrogen starvation on the phycocyanin promoter in the cyanobacterium, *Synechococcus* sp. PCC 7002. Brown University, Rhode Island.

Molecular Biology of Cyanobacteria Workshop. July, 1987. The effect of variable environmental stress conditions on the phycocyanin and photosystem II promoters in the cyanobacterium, *Synechococcus* sp. PCC 7002. St. Louis, Missouri.

Sixth Summer Symposium in Molecular Biology. July, 1987. The effect of variable environmental stress conditions on the phycocyanin and photosystem II promoters in the cyanobacterium, *Synechococcus* sp. PCC 7002. The Pennsylvania State University.

Third Annual Penn State Symposium in Plant Physiology. May, 1988. Regulation of phycocyanin expression in *Synechococcus* sp. PCC 7002. The Pennsylvania State University.

Beltsville Agricultural Research Center Poster Day. March, 1992. Construction of a novel toxin delivery system for biocontrol of Colorado potato beetles. Beltsville, Maryland.

International Organization of Mycoplasmaology. August, 1992. Revised classification of spiroplasmas. Ames, Iowa.

International Organization of Mycoplasmaology. August, 1992. Tabanid spiroplasma serovars. Free paper presentation. Ames, Iowa.

Beltsville Agricultural Research Center Poster Day. June, 1993. Construction of a novel toxin delivery system for biocontrol of Colorado potato beetles. Beltsville, Maryland.

Beltsville ARS Poster Day. March, 1994. Progress in the development of diagnostic molecular markers for introduced Mediterranean fruit fly populations. Beltsville, MD.

International Organization of Mycoplasmaology. July, 1994. Cloning and characterization of a cryptic extrachromosomal element isolated from the mollicute *Spiroplasma taiwanense* for use in vector construction. Bordeaux, France.

American Society for Microbiology. May, 1995. Molecular heterogeneity among Group XIV Spiroplasmas. Gail E. Gasparich, Kevin J. Hackett and Robert F. Whitcomb. Washington, DC.

American Society for Microbiology. May, 1997. First *Spiroplasma* isolation from Caterpillars (Satin Moth--*Stilpnotia salicis*). Gail E. Gasparich, Jerzy. J. Lipa, Dwight E. Lynn, and Kevin J. Hackett. Miami, FL.

International Organization of Mycoplasmaology. July, 1998. Comparison of Serological and Molecular Characters to Distinguish Inter- and Intra-species Relationships Among the Group VIII Spiroplasmas Isolated from Various Tabanid Fly Hosts. Gail E. Gasparich Sydney, Australia.

American Society for Microbiology. May, 1999. Taxonomic study of New Strains of *Spiroplasmas* from Biting midge Genera *Forcipomyia* and *Atrichopogon* (Diptera: Ceratopogonidae). Gail Gasparich, Mark Frana, William Grogan, and Frank E. French. Chicago, IL.

American Society for Microbiology. May, 2000. Classification and Characterization of the First Spiroplasma Isolated from a Biting Midge (*Forcipomyia glauca*) Using Serological and Molecular Techniques. A. C. Cottrell and G. E. Gasparich. Los Angeles, CA.

American Society for Microbiology. May, 2000. A Comparative Study of *para* and *meta*-dechlorinating Bacterial Consortium from Pristine and Contaminated Sites in the Chesapeake Bay Area. J. W. Pfarr, G. E. Gasparich, and D. A. Wubah. Los Angeles, CA.

Maryland State Conference on Gifted and Talented Education. October 13/14, 2000. Females in Science. Lynn Cole and Gail Gasparich. Ellicott City, MD.

American Society for Microbiology Annual Meeting. May, 2001. Use of 16S rRNA and 16S-23S Intergenic Spacer Region for Phylogenetic Analysis of the Genus *Spiroplasma*. Brian Craig (UG Student) and Gail E. Gasparich. Orlando, FL.

American Society for Microbiology Annual Meeting. May, 2002. The Use of DNA Fingerprinting Techniques to Distinguish Group VIII *Spiroplasma* subgroups. Layla R. Hilbun (UG) and Gail E. Gasparich. Salt Lake City, UT.

Society for the Study of Amphibians and Reptiles. July, 2002. Populations Genetics of *Eurycea junaluska* on Multiple Spatial Scales. Andrew Eckert, Katie Smith and Gail Gasparich. Kansas City, MO.

Eastern Educational Research Association Annual Conference. February, 2003. Gifted Students Explain Posters of Self as Scientist. Lynn Cole and Gail E. Gasparich. Hilton Head, SC.

American Society for Microbiology Annual Meeting. May, 2003. Characterization of a Novel *Spiroplasma* sp. Isolated from a Poland Satin Moth Larvae (*Stilpnotia salicis*). Marietta Oduori and Gail E. Gasparich. Washington, DC

American Society for Microbiology Annual Meeting. May, 2003. Genus-wide Survey of Spiroplasmas for the SARP Protein. Anna Segal and Gail E. Gasparich. Washington, DC.

American Society for Microbiology Annual Meeting. May, 2004. *Spiroplasma atrichopogonis* sp. nov. (Mollicutes: Entomoplasmatales: Spiroplasmataceae) from a biting midge (Diptera: Ceratopogonidae). Randolph Koerber, Gail E. Gasparich, Mark F. Frana, and William L. Grogan. New Orleans, LA.

International Organization of Mycoplasmology. July, 2005. Development of Fibrillin-based Spiroplasma Clade Specific Identification. Gail E. Gasparich, Anna Segal, and R. Thomas Koerber. Athens, GA.

Mid-Atlantic Ecology Conference. March, 2005. RNA Analysis and Differential Gene Expression in Blacknose Dace (*Rhinichthys atratulus*): Effects of Urbanization. Elizabeth Tall and Gail E. Gasparich. Catonsville, MD.

USM UG Student Research Days. March, 2005. Multiplex PCR Identification of Spiroplasma Species Based on Fibrillin Gene. R. Thomas Koerber, Anna Segal and Gail E. Gasparich. Annapolis, MD.

USM UG Student Research Days. March, 2005. Taxonomical Analysis of Subfamilies of Robber Flies (Diptera: Asilidae) Using Molecular Techniques. Steven Page, Aubrey Scarbrough and Gail E. Gasparich. Annapolis, MD.

Colonial Academic Alliance UG Research Conference. April, 2005. Multiplex PCR Identification of Spiroplasma Species Based on Fibrillin Gene. R. Thomas Koerber, Anna Segal and Gail E. Gasparich. Towson, MD. (Poster and Oral Presentation)

Sixth Annual Student Research EXPO. April, 2005. Multiplex PCR Identification of Spiroplasma Species Based on Fibrillin Gene. R. Thomas Koerber, Anna Segal and Gail E. Gasparich. Towson, MD.

Sixth Annual Student Research EXPO. April, 2005. Multiplex PCR Identification of Spiroplasma Species Based on Fibrillin Gene. R. Thomas Koerber, Anna Segal and Gail E. Gasparich. Towson, MD.

Sixth Annual Student Research EXPO. April, 2005. Taxonomical Analysis of Subfamilies of Robber Flies (Diptera: Asilidae) Using Molecular Techniques. Steven Page, Aubrey Scarbrough and Gail E. Gasparich. Towson, MD.

Sixth Annual Student Research EXPO. April, 2005. Differentiation of Spiroplasma Group I and VIII Subgroups Using 16S rDNA PCR and DGGE Analysis. Bradley A. Bowser and Gail E. Gasparich. Towson, MD.

Sixth Annual Student Research EXPO. April, 2005. RNA Analysis and Differential Gene Expression in Blacknose Dace (*Rhinichthys atratulus*): Effects of Urbanization. Elizabeth Tall and Gail E. Gasparich. Towson, MD.

American Society for Microbiology General Meeting. June, 2005. Differentiation of Spiroplasma Group I and VIII Subgroups Using 16S rDNA PCR and DGGE Analysis. Bradley A. Bowser and Gail E. Gasparich. Atlanta, GA.

American Society for Microbiology. June, 2005. Multiplex PCR Identification of Spiroplasma Species Based on Fibrillin Gene. R. Thomas Koerber, Anna Segal and Gail E. Gasparich. Atlanta, GA.

American Society for Microbiology. June, 2005. Two *Spiroplasma* sp. strains GMG3 and GMH (Mollicutes: Entomoplasmatales: Spiroplasmataceae), Isolated from Gypsy Moth Larvae (*Lymantria dispar* L.). Antoine Silva, Lisa Hutchinson and Gail E. Gasparich, Atlanta, GA.

American Society for Microbiology. June, 2005. Geographic Diversification of Novel Spiroplasma Isolates. A. B. Zarzuela, Frank E. French, Gail E. Gasparich, and Laura B. Regassa. Atlanta, GA.

SENCER Summer Institute 2005, August, 2005. Integrating SENCER Components into Science Technology and Society General Education Courses-A Start. Gail E. Gasparich and Sarah Haines. Santa Clara, CA.

Joint Conference on Chemical and Biological Defense Research. October, 2005. Identification and characterization of bio-warfare agents in complex matrices. Choi, F., Zimmermann, S., Gasparich, G. and Lev, S. M. 2005. Timonium, MD.

CAA UG Research Conference. April, 2006. Novel *Spiroplasma* sp. strains (Mollicutes: Entomoplasmatales: Spiroplasmataceae) Isolated from Gypsy Moth Larvae (*Lymantria dispar* L.). Lisa Hutchinson, Antoine Silva, and Gail E. Gasparich. James Madison University, Harrisonburg, VA.

American Society for Microbiology. May, 2006. Characterization and Phylogenetic Analysis of Novel *Spiroplasma* sp. Using 16S rDNA Sequence. Patrick Hagner, Tiara Moore, Selwyn Mitchell, and Gail E. Gasparich. Orlando, FL.

American Society for Microbiology. May, 2006. Preliminary Characterization of Putative Novel Spiroplasma Species. T. E. Young, D. S. Bostick, C. A. Nelson, F. E. French, G. E. Gasparich, and L.B. Regassa. Orlando, FL.

International Organization of Mycoplasmology. July, 2006. Characterization and Phylogenetic Analysis of Novel *Spiroplasma* sp. Using 16S rDNA Sequence Analysis. G. E. Gasparich, P. Hagner, T. Moore, and S. Mitchell. Cambridge, UK.

International Organization of Mycoplasmology. July, 2006. Preliminary Characterization of Novel Tabanid-Associated *Spiroplasma* Species. T. E. Young, D. S. Bostick, C. Nelson, F. E. French, G. E. Gasparich, R. F. Whitcomb, and L. B. Regassa. Cambridge, UK.

International Organization of Mycoplasmology. July, 2006. U.S. Species and New Species of *Spiroplasma* in the Costa Rican Highlands: Implications for Biogeography and Biodiversity. R. F. Whitcomb, J. G. Tully, G. E. Gasparich, L. B. Regassa, and F. E. French. Cambridge, UK.

2006 Joint Conference on Chemical and Biological Defense Research. November, 2006. Identification and quantification of trace amounts of the stimulant *Bacillus subtilis* from simulated aerosol samples. L. King, J. Moore, G. Gasparich, and S. M. Lev. Hunt Valley, MD.

Eighth Annual Student Research EXPO. April, 2007. Development of Amplified rDNA Restriction Analysis (ARDRA) for the Identification of *Spiroplasma* species. A. Chamberlain and G. E. Gasparich. Towson, MD

Eighth Annual Student Research EXPO. April, 2007. Development of Specific, Primer-based Identification of *Spiroplasma* sp. Using the Fibrillin Gene. B. O'Flaherty and G. E. Gasparich. Towson, MD.

American Society for Microbiology. May, 2007. Spiroplasmas Associated with the Gut Lumen of Five Leafhopper Species (Hemiptera, Cicadellidae). E-D. Ammar, T. Y. Toruno, G. E. Gasparich and S. A. Hogenhout. Toronto, Canada.

American Society for Microbiology. May, 2007. Characterization of Novel Spiroplasma Species Isolated from Geographically Diverse Tabanid Hosts. T. E. Young, D. S. Bostick, C. A. Nelson, M. M. Jordan, F. E. French, G. E. Gasparich and L. B. Regassa. Toronto, Canada.

Towson University Department of Biological Sciences REU Program Colloquium. August, 2007. Peccaries effect on population structure of *Physalaemus petersi*. D. Skinner and G. E. Gasparich. Towson, MD.

Joint Conference on Chemical and Biological Defense Research. November, 2007. Establishing a threshold for detecting the presence of a bio-agent in a complex matrix using an inorganic fingerprint approach. B. Houlihan, D. Stevens, S. M. Lev and G. E. Gasparich. Hunt Valley, MD.

American Society for Microbiology. June, 2008. Taxonomic Characterization of Spiroplasmas Associated with the Gut Lumen of Leafhopper Species (Hemiptera, Cicadellidae). E-D. Ammar, S. A. Hogenhout and G. E. Gasparich. Boston, MA.

American Society for Microbiology. June, 2008. Full Characterization of Four Novel *Spiroplasma* Species from the Costa Rican Highlands. T. E. Young, R. Rosenberg, M. M. Jordan, F. E. French, G. E. Gasparich, M. M. Miller and L. B. Regassa. Boston, MA.

Colonial Academic Alliance. April, 2009. Characterization of Three Spiroplasma Strains Isolated from Leafhopper Insects. Grace Mayokun Demehin and Gail Gasparich. Towson, MD.

American Society for Microbiology. May, 2009. Taxonomic Characterization and Revised Phylogenetic Analysis of Novel Isolates within the Genus *Spiroplasma*. G. Demehin and G. E. Gasparich. Philadelphia, PA.

International Organization for Mycoplasma. July, 2010. A novel species of spiroplasma *S. eriocheiris* sp. nov., associated with mortalities in Chinese mitten crab *Eriocheir sinensis*. Wen Wang, Wei Gu, Gail E. Gasparich, Keran Bi, Jiangtao Ou, Qingguo Meng and Tingming Liang. Chianciano Terme, Siene, Italy.

### **Leadership:**

2000-present: Director of the NIH Bridges to the Baccalaureate Program

2002-present: Co-Director, Department of Biological Sciences Graduate Program at Towson University

2002-present: Director, Women in Science Program at Towson University

2004-present: Chair, University Curriculum Committee Reporting Committee on Course Approvals

2004-present: NCAA Faculty Athletic Representative, report to President Caret

2008-present: NSF ADVANCE IT-START Program Director

2009-present: Councilor, Association for Women in Science

2007-2008: President, Sigma Xi Towson Chapter

2001-2004: American Society for Microbiology Division G Chair-elect (2001-2002), Chair (2002-2003) and Past Chair (2003-2004—advisory role)

2002-2004: Co-Director, Molecular Biology, Biochemistry and Bioinformatics Program at Towson University

1998-2004: Director of the MSC Academy for Applied Science at Towson University

**Grants:**

- 2008: NSF ADVANCE-IT START: “ADVANCEment Towards Institutional Transformation at Towson University” PI, \$191,709 (Funded)
- 2008: NIH Bridges to the Baccalaureate Program: “Facilitating Seamless Transition from Community College to Towson University” PI, \$580,029 (Funded)
- 2007: NSF MIP: “Phage-Spiroplasma Genome Interaction as a Model for Genome Expansions and Contractions” Co-PI (with Oklahoma State University), \$638,858 (Not Funded)
- 2007: NSF Division of UG Education—S-STEM: Scholarships in Science, Technology, Engineering and Mathematics. “CoSMIC\*--Computing, Sciences, and Mathematics in College.” Co-PI with Joyce Curie Little and Martha Siegel, \$580,920 (Funded)
- 2006: DOD: Defense University Research Instrumentation Program. “Identification and characterization of bio-warfare agents in complex matrices using Laser Ablation Inductively Coupled Plasma-Time of Flight-Mass Spectrometry (LA-ICP-TOF-MS).” Steven Lev, Gail Gasparich (Biology), Cindy Zeller (Chemistry) and Dave Schaefer. (Not funded)
- 2006: NSF Division of Molecular and Cellular Biosciences—Microbial Observatories and Microbial Interactions and Processes. “MIP: Host Interactions and Pathogenicity of *Spiroplasma penaei*.” Co-PI with Donald Lightner (University of Arizona), \$256,568 (Not Funded)
- 2006: NSF Division of Environmental Biology-Ecological Biology Cluster. “Niche Diversification of *Spiroplasma penaei*: Origin, Entry and Establishment as a Pathogen in a Marine Invertebrate.” Co-PI with Donald Lightner (University of Arizona), \$296,948 (Not Funded)
- 2006: NIH Bridges to the Baccalaureate Program: “Facilitating Seamless Transition from Community College to Towson University” PI, \$580,029. (Not Funded)
- 2005: NSF HRD-RGSE “A Comparative Longitudinal Study of Women Science Majors: Pilot Study to Determine Factors Impacting Retention of Women Students Majoring in STEM Programs” PI, \$462,822 (Not Funded).
- 2005: NSF DMR-MRI “Acquisition of Equipment to Upgrade an Existing Atomic Force Microscope for Quantitative Force Measurements” Co-PI, Recommended for Funding, \$73,000.
- 2005: MD State Department of Education “Maryland Summer Center Academy” Awarded \$35,000
- 2004: MD State Department of Education “Maryland Summer Center Academy” Awarded \$30,121
- 2003: National Institutes of Health “Facilitating Seamless Transitions from Community Colleges to Towson University” PI with Carol Berkower, David Schaefer, Barry Margulies, Tim Dwyer, Vonnie Shields, Colleen Sinclair and Roland Roberts as Co-PI. Awarded \$548,000 for three years
- 2003: MD State Department of Education “Maryland Summer Center Academy” with Lynn Cole (ELED) Awarded \$25,000
- 2002: National Science Foundation “C-RUI: Cellular, Physiological and Life-history Responses of a Stream Fish, Blacknose Dace (*Rhinichthys atromaculatus*) to Urbanization” Co-PI with Drs. Joel Snodgrass (PI) and Jay Nelson (Co-PI). Awarded \$286,132 for three years
- 2001: MD State Department of Education “Maryland Summer Center Academy” with Lynn Cole (ELED) Awarded \$47,000
- 2000: MD State Department of Education “Maryland Summer Center Academy” with Lynn Cole (ELED) Awarded \$50,000
- 2000: National Institutes of Health “Facilitating Seamless Transitions from Community Colleges to Towson University” PI with Carol Berkower, Erik Silldorff, Laurie Williams-Hogarth, and David Schaefer as Co-PI. Awarded \$281,502 for three years
- 1999: NSF Major Research Instrumentation “Nanotechnology Research at Towson University” Funded for \$101,000 Co-PI with Drs. David Schaefer and Daniel Wubah.
- 1999: MD State Department of Education “Maryland Summer Center Academy” with Lynn Cole (ELED) Awarded \$65,000

- 1999: USM/Academic Affairs “Increasing Minority Student Retention at Towson University through Research” with Daniel Wubah (BIO) and David Schaefer (PHYS) Awarded \$17,550  
1998: TU Faculty Development Research Grant “Isolation of spiroplasma attachment proteins” \$1200  
1998: MD State Department of Education “Maryland Summer Center Academy” with Lynn Cole (ELED) Awarded \$65,000  
1998: USM “Minority recruitment and retention in the Life Sciences” (Co-PI with Dan Wubah and David Schaefer) Awarded \$18,584  
1998: Teaching/Departmental Enhancement Monetary Grant—to partially fund the 1998 Women In Science Forum Awarded \$700  
1998: TU Faculty Development Curriculum Development Grant “Development of a human genetics course” Awarded \$1,800.  
1997: MD State Department of Education “Maryland Summer Center Academy” with Lynn Cole (ELED) Awarded \$65,000  
1997: TU Faculty Development and Research Committee Summer minigrant for Curriculum Development of a Women, Gender and Science (Course Development) \$1050  
1996: Towson University Faculty Development Grant “Development of a *Spiroplasma/Escherichia coli* shuttle vector for use in the biocontrol of insect pests.” \$1,200.

**Service:**

- 1993-present USAID Biocontrol Grant Review Panel Member. USDA/CSRS Grant reviewer  
1996-present Chair, Institutional Biosafety Committee for Towson University.  
1996-2003 Mentor, TU SAGE Program  
1996 Mentor for Amanda Gerry (St Pious Elementary School in Bowie, MD)  
1997 Present Workshop on Molecular Visualization for TU COSM.  
1998-present EPA Fellowship Grant Reviewer (Ad Hoc or Panel)  
1998-2000 Departmental Seminar Committee  
1997-2003 Faculty participant in College for Kids Program  
1997-present Biology Awards Committee  
1997-2005 Premedical/Predental Committee  
1998-2004 Faculty mentor for the Towson University SURB program  
1998-2001 Faculty mentor for the Towson University USM sponsored Minority Student Research program  
1998-present University Curriculum Committee Subcommittee for Course Approval  
1998-present Coordinate and participate in teaching the Medical Microbiology course for Becton Dickinson (Outreach)  
1998-present Graduate Studies Committee  
1999-present Women in Science Steering Committee  
2000 Awarded Fellowship from American Embassy in South Africa to travel to collaborate with two colleagues at the University of Venda—to help them establish laboratories and research with students  
2000-present Member of the University General Education Committee  
2001-2005 Member of the University Honors Committee  
2001-present Member of the Intercollegiate Athletic Committee  
2001-2004 CSM College P & T Committee  
2002-2003 Department of Biological Sciences P & T Committee  
2004-present NIH, Bridges to the Future Grant Review Panel  
2004-present Member, Institute for Teaching and Research on Women (ITROW) Board  
2004-present NCAA Faculty Athletic Representative



Shawn Townes (BCCC-Bridges)  
Marietta Oduori (BCCC-Bridges)  
Julia Butler (BCCC-Bridges)  
Rose Mwangi (BCCC-Bridges)  
Ranette Harrington (BCCC-Bridges)  
Antoine Silva (CCBC-Bridges)  
Lisa Hutchinson (BCCC-Bridges)  
Brenda McNeil (BCCC-Bridges)  
Nikita Datta (middle school student)

Cindy Ung (high school student)  
Matthew Dunlop (high school student)  
Elena Vanko (high school student)  
Matt Higgins (high school student)  
Peter Rangelov (high school student)  
Chelsea Pula (high school student)  
Sandya Lakkur (high school student)  
Arjun Pradeep (high school student)

Argi Garefalaki (Master of Science degree, December, 1998—Maryland State Police Crime Laboratory)  
Cindy Ghent (Master of Science degree, December, 1999—Lecturer, Towson University, M.Ed. Candidate  
UMCP)  
Jerry Pfarr (Master of Science degree, May, 2002—Department of Defense, Aberdeen)  
Anna Segal (Master of Science degree, August 2003—BD Diagnostics, Inc)  
Katie Smith (Research Scientist-NIH)  
Patrick Hagner (Master of Science degree, May 2006—Ph.D. candidate UMB)