

**DEBRA L. WOHL**  
 Department of Biology  
 Elizabethtown College  
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**Position:** Associate Professor, Department of Biology, Elizabethtown College

**Research Interests:** Microbial ecology; community interactions; effects of environmental change on aquatic systems, antibiotic resistance, ecosystem health.

**Education/ Professional Preparation:**

University of Virginia, Charlottesville, VA	Microbial Ecology	Post Doc, 1999
University of Georgia, Athens, GA	Ecology	Ph.D., 1998
University of Georgia, Athens, GA	Entomology	M.S., 1994
University of Michigan, Ann Arbor, MI	Biology	B.S., 1990

**Appointments:**

Elizabethtown College, Associate Professor	May 2009 – present
Elizabethtown College, Assistant Professor	August 2004 – May 2009
University of Richmond, Assistant Professor	August 1999 – 2004
Blandy Experimental Farm, University of Virginia, Visiting Scientist	June - August 2003
Academy of Natural Sciences, Staff Scientist	August 1990 – 1992

**Teaching Experience:**

Elizabethtown College:

- Biological Concepts (Bio 101 – lecture and laboratory) – Introductory science course to meet core requirements of non-science majors; this course introduces students to current and relevant biological issues along with the basic mechanisms of life  
*Spring 2005, 2006, 2008*
- Cells, Molecules & Animal Systems (Bio111-lecture) – First semester course of the biology core; this course introduces biology and health majors to cellular basis of life, anatomy and physiology, cellular reproduction, heredity, and animal development  
*Fall 2004, 2005, 2009, 2011-2013*  
*Honors Section: Fall 2007-2013*
- Introduction to the Biological Sciences for Health & Occupation Majors (Bio110-lecture) – First semester of the introductory biology core *Fall 2006*
- Cells, Molecules & Animal Systems (Bio110/111-laboratory) – First semester of laboratory exercises for the biology core, taken in conjunction with Bio110/111  
*Fall 2004, 2005, 2006,*  
*Honors Section: 2007-2013*
- Microbiology (Bio 235/Bio 235L – lecture and laboratory) – General microbiology course for biology majors; course includes survey of microbial diversity, physiology and roles in the environment  
*Spring 2005-2008, 2010- 2011, 2013*
- Pathogenic Microbiology (Bio336/Bio 336L – lecture and laboratory) – Upper division course in pathogenesis including mechanisms of attachment and invasion *Fall 2004-2013*

- Research in Biology (Bio 491/492) – Upper division students may sign up for 1-3 hours of research. Students spend numerous hours in the lab with me on joint projects or on independent research  
2004-2013

#### University of Richmond:

- Organismal Biology (Bio211-lecture) – First semester of the introductory biology core  
Fall 2000, 2001, 2002
- Organismal Biology Lab (Bio211L -laboratory) – First semester of the introductory biology core labs providing hands-on experiential learning  
Fall 2001, 2002
- Microbiology (Bio301/Bio 301L – lecture and laboratory) – Upper division general microbiology course  
Fall 1999, 2000, Spring 2003, 2004
- Microbiology (Bio501/Bio 501L – lecture and laboratory) – Graduate-level microbiology course  
Fall 2000
- Microbial Ecology (Bio333/Bio 333L – lecture and laboratory) – Upper division course in microbial ecology; *Microbiology 301* pre-requisite  
Spring 2000, 2001
- Microbial Ecology (Bio533/Bio 533L – lecture and laboratory) – Graduate-level course in microbial ecology; *Microbiology 501* or equivalent pre-requisite  
Spring 2001
- Tutorial in Bacterial Pathogenesis (Bio351-seminar) – Independent study course on bacterial pathogens using the primary literature  
Fall 2000
- Microbial Pathogenesis (Bio351- lecture) – Upper division course on the molecular biology and mechanisms of microbial pathogens  
Fall 2001
- Biology Internship (Bio388-lecture) – Advises, coordinates and oversees off-campus internship program; meets weekly.  
Spring 2000, 2001
- Unseen Life (Bio106/Bio 106L – lecture and laboratory) – Non-science majors microbiology course, fulfills the general education science requirement  
Spring 2003, 2004
- Undergraduate Research (Bio 349/350) – Independent research conducted with faculty mentor  
2000-2004
- Undergraduate Honors Research (Bio 395/396) – Independent research for students in the Biology Honors Program, conducted with faculty mentor  
2003-2004

#### University of Georgia:

- Introductory Biology for non-science majors (Biol 103-laboratory) – Teaching assistant for introductory non-science majors laboratory  
Fall 1994
- Introductory Biology (Biol 109-laboratory) – Teaching assistant for introductory biology laboratory  
Spring 1995

#### **Publications** (\*Undergraduate Research Student)

- K. (Snyder) Tyrie<sup>\*</sup>, **Wohl, D.L.**, and W. Curry. 2013. Effects of Antibiotic Exposure and Immune System Challenge on the Development of Allergic Asthma. *BIOS*, 84(1): 14-20.
- Lessem, P.B. and **D.L. Wohl**. 2005. Unseen Life: Engaging Non-Science Students through Microbiology. *Proceedings of the Association for Biology Laboratory Education*, 27: 362-367.
- Wohl, D.L.**, M.J. Lemke, T. Gorrell, M. Levandowsky. 2005. Exploring Microbial Diversity through a Microbe Collection. *American Society for Microbiology: MicrobeLibrary Curriculum Collection* (<http://www.microbelibrary.org/>). **AWARDED: ‘Editor’s Choice Award’ by the American Society for Microbiology, MicrobeLibrary, 2006**

**Publications continued** (\*Undergraduate Research Student)

- Wohl, D.L., S. Arora\*, & J.R. Gladstone\***. 2004. Functional redundancy supports biodiversity and ecosystem function in a closed and constant environment. *Ecology*, 85(6): 1534-1540.
- Wohl, D.L.** and D.R. Bowne. 2002. Collected thoughts on negotiating for a position in academia. *Bulletin of the Ecological Society of America*, 83(2): 129-130.
- Wohl, D.L.** and J V. McArthur. 2001. Aquatic actinomycete-fungal interactions & their effects on organic matter decomposition. *Microbial Ecology*, 42(3): 446-457.
- Wohl, D.L.** and J V. McArthur. 1998. Actinomycete-flora associated with submersed freshwater macrophytes. *FEMS Microbiology/Ecology*, 26(2): 135-140.
- Wohl, D.L., J.B. Wallace & J.L. Meyer.** 1995. Benthic macroinvertebrate community structure, function and production with respect to habitat type, reach and drainage basin in the southern Appalachians (USA). *Freshwater Biology*, 34: 101-118.

**Papers at Meetings & Symposia** (\*Undergraduate Research Student)

- Curry, W., D. Wohl, J. Miller, D. Mauger, K. Tyrie. A Retrospective Analysis of Intrapartum Antibiotics During Delivery And Atopic Dermatitis In Children. North American Primary Care Research Network (NAPCRG). November 2013.
- Wohl, D.L., W.J. Curry, J. Miller. Disrupting Primary Succession During Childbirth: Is there a long-term consequence. Ecological Society of America (ESA), August 2012.
- Snyder, K.N.,\* W.J. Curry, J. Miller, and D.L. Wohl. Effects of Antibiotic Exposure and Immune System Challenge on the Development of Allergic Asthma. Tri-Beta Northeast District 2 Conference. March 2011
- Wohl, D.L. and D.R. Bowne. A Landscape Perspective on Antibiotic Resistance in Soil Bacteria. 13<sup>th</sup> International Symposium on Microbial Ecology (ISME). August 2010.
- Wohl, D.L. and D.R. Bowne. A Landscape Perspective on Antibiotic Resistance in Soil Bacteria. 2<sup>nd</sup> ASM Conference on Antimicrobial Resistance in Zoonotic Bacteria and Foodborne Pathogens in Animals, Humans, and the Environment. June 2010.
- Wohl, D.L. and W.J. Curry. Effect of maternal antibiotic use on community assembly of the neonatal gut microbiota. Ecological Society for America and International Ecological Society (ESA-INTECOL) Joint Meeting. August 2009. **Organized symposium.**
- Matakas, J.D.\* and Debra L. Wohl. Determining the Function of Atu2115 in *Agrobacterium tumefaciens*. Tri-Beta Northeast District 2 Conference. March 2009.
- McDonald, R., D.R. Bowne, and D.L. Wohl. Urban Ecology in Miniature: Spatial Analysis of Antibiotic Resistance in *Enterobacter* spp. Isolates Gathered from Soils of Lancaster City, Pennsylvania.. Mid-Atlantic Ecological Society of America. March 2009.
- Bowne, D.R. and D.L. Wohl. Mapping antibiotic resistance across a landscape: A collaborative research project for high school students, undergraduates, and faculty. Ecological Society of America (ESA). August 2008. **Organized symposium.**
- Wohl, D.L. and D.R. Bowne. Superbugs are everywhere! Antibiotic resistant bacteria in farms, forests, and front yards. Ecological Society of America (ESA). August 2008.
- Bowne, D.R. and D.L. Wohl. A Landscape Perspective on Antibiotic Resistance. Emerging Contaminants Forum, Pennsylvania Department of Environmental Protection. January 2008. **Invited talk.**
- Wohl, D.L. and D. R. Bowne. 1500 miles, 94 Landowners, 8 High School Students, 2 Undergraduates, and 2 PIs: A big project at a small school. Mid-Atlantic Association of Liberal Arts Chemistry Teachers (MALACT). November 2007. **Invited talk.**
- Wohl, D.L. Micro organisms, macro challenges: Teaching microbes as models in ecology. American Society for Microbiology (ASM). May 2007. **Organized symposium.**

**Papers at Meetings & Symposia continued** (\*Undergraduate Research Student)

- Hurst, C.\*, and D.L. Wohl. Randomly amplified polymorphic DNA (RAPD) analysis of microbial communities from Lake Placida. Tri-Beta Northeast District 2 Conference. March 2007 & Pennsylvania Academy of Sciences (PAS). April 2007.
- Valkovec, A. M. \*, E. S. Ward\*, and Debra L. Wohl. Spatial Analysis of Antibiotic Resistance in Soil Samples. Tri-Beta Northeast District 2 Conference. March 2007 & Pennsylvania Academy of Sciences (PAS). April 2007.
- Alihboy, A.\* and D.L. Wohl. Determining the distribution of *Erwinia amylovora* in soil in relation to fire blight infections in an apple orchard. Pennsylvania Academy of Sciences (PAS). April 2006.
- Martinez, B.\*, A. Valkovec\*, L. Gruenewald\*, T. Popielarczyk\*, R. Knowlton\*, D.L. Wohl, and J.F. Cavender. Effectiveness of commercially available mouth washes on the growth of orally-derived bacteria. Pennsylvania Academy of Sciences (PAS). April 2006.
- Gruenewald, L. \*, T. Popielarczyk\*, A. Valkovec\*, B. Martinez\*, R. Knowlton\*, D.L. Wohl, and J.F. Cavender. Correlation of antibiotic resistance found in oral bacteria with overall dental health. Pennsylvania Academy of Science (PAS). April 2006.
- Wohl, D.L. Environmental fluctuations facilitate species co-existence and increase organic matter decomposition. Ecological Society for America and International Ecological Society (ESA-INTECOL) Joint Meeting. August 2005.
- Lessem, P.B. and D.L. Wohl. Unseen Life: Engaging Non-Science Students Through Microbiology. Association for Biology Laboratory Education Conference (ABLE). June 2005.
- Wohl, D.L. Learning about Microbial Diversity through a "Microbe Collection". American Society for Microbiology – Conference of Undergraduate Educators (ASM-CUE). May 2004.
- Wohl, D.L. and P.B. Lessem. What can we learn from teaching biology majors, non-science students, and high school students microbiology?. "Invention and Impact: Building Excellence in Undergraduate STEM Education" National Science Foundation Course, Curriculum, and Laboratory Improvement (NSF-CCLI) program conference. April 2004.
- Invited talk.**
- Corbitt\*, N. and D.L. Wohl. The Correlation between a Stream's Point Source Pollution and Antibiotic Resistant Bacteria. Annual Biomedical Research Conference for Minority Students (ABRCMS). October 2003.
- Cook\*, E. and D.L. Wohl. Regulation of cellulase in three microbial isolates. American Society for Microbiology National Meeting (ASM). May 2003.
- Wohl, D.L., S. Arora\*, J.R. Gladstone\*, A.L. Huntington\*, S. Joseph\*, P. Matri\*, and N. Martcheva\*. Functional Redundancy: Effects on microbial diversity & cellulose degradation in stable versus fluctuating environments. American Society for Microbiology National Meeting (ASM). May 2003.
- Wohl, D.L., P.B. Lessem, and J.B. Reed. Microbiology & discovery: for biology majors, non-science students, and high school students. American Society for Microbiology Education Conference (ASM-ED). May 2003.
- Wohl, D.L., P.B. Lessem, J.B. Reed. Discovering science through microbiology: Biology majors, non-science students, and high school students. Virginia Academy of Science (VAS). May 2003.
- Arora\*, S., J.R. Gladstone, and D.L. Wohl. Biodiversity supports greater ecosystem function and stability. Annual Meeting of the American Association for the Advancement of Science. February 2003. **Awarded: Merck/AAAS USRP student poster competition.**
- Matri\*, P., A.L. Huntington\*, S. Joseph\*, N. Martcheva\* and D.L. Wohl. The effects of disturbance on microbial community composition and ecosystem function. American Society for Microbiology – VA Branch (ASM – Va Branch). November 2002.

Wohl, D.L., S. Arora\*, A.L. Huntington\*, and S. Joseph\*. Functional Redundancy: Effects On Microbial Diversity & Cellulose Degradation. American Society of Oceanography and Limnology (ASLO). June 2002.

**Papers at Meetings & Symposia continued** (\*Undergraduate Research Student)

Wohl, D.L., P.B. Lessem, J.B. Reed. Discovering science through microbiology: Biology majors, non-science students, and high school students. Virginia Academy of Science (VAS). May 2002.

Wohl, D.L. The Effect of Increased Functional Redundancy on Cellulose Degradation. Ecological Society of America (ESA). August 2001.

Wohl, D.L. Functional Redundancy: Is more better? American Institute of Biological Sciences (AIBS), Washington, DC. March, 2001.

**Other Presentations:**

2010 SuperBugs Abound!! Antibiotic Resistant Bacteria in the Farms, Forests, and Front Yards of Lancaster County  
*Millersville University, Millersville, PA*

2010 Studying antibiotic resistant bacteria across a landscape: A collaborative ecological experience for high school students and faculty at Elizabethtown College (Debra Wohl & David Bowne)  
*Elizabethtown College Scholarship Reconsidered: Faculty Innovations in Teaching, Research, and Service (Faculty Conference)*

2009 “A Landscape Perspective on Antibiotic Resistance” (Debra Wohl & David Bowne)  
*Environmental Health Symposium – Exposure Risks and Concerns. Kings Gap Environmental Education Center, Carlisle, PA*

2007 “SuperBugs Are Everywhere!! Antibiotic Resistant Bacteria in the Farms, Forests, and Front Yards of Lancaster County” (David Bowne & Debra Wohl)  
*Franklin & Marshall College, Lancaster, PA*

2006 “Finding a host: How Geography, Host Behavior, Mode of Transmission, Ecology & Host Susceptibility all affect a pathogen’s success”  
*Monmouth University, Monmouth, NJ*

2005 “Antibiotic Resistant Bacteria in the Environment: Their rise, our demise?”  
*University of Delaware, Newark, DE*

2004 “Biodiversity & Ecosystem Functioning: In a closed and constant environment, is more diversity better?”, Academy of Natural Sciences of Philadelphia

2004 “Antibiotic Resistant Bacteria in the Environment: Their rise, our demise?”  
*Alfred University, Alfred, NY*

2002 “What do you need to know about microbes?”  
*St. Christopher’s High School, Richmond, VA*

2000 “In the flow: Microbiology and macroinvertebrates”  
*University of Virginia’s Blandy Experimental Farm*

**Organizer of Discussion Workshop:**

Wohl, D.L. and D.R. Bowne. 2001. Dealing for your future: Negotiating salary, start-up, and other essentials in academic hiring. 86<sup>th</sup> Annual Ecological Society of America Conference, Madison, WI. *Panel Discussion.*

**Grants & Awards:**

- 2013 Summer Scholarship, Creative Arts & Research Program, Elizabethtown College: “Understanding Temporal and Spatial Complexity of the Microbiome of the Built Environment”.  
PI: Wohl, D.L.  
**Outcome: Supports Jessica Albrecht & Gates Failing for 4 weeks of summer research**
- 2013 Emergent Scholar Mentor, *Marisa Del Gaudio*
- 2012 Emergent Scholar Mentor, *Madison Brown*
- 2010, 2013 Nominated for the Richard Crocker Outstanding Service to Students Award. Elizabethtown College
- 2010 College Scholar Mentor, *Kaitly Snyder*
- 2008 Student Challenge Award Program, Earthwatch Institute: “Mapping antibiotic resistant bacteria across a landscape”  
PIs: Bowne, D.R. and D.L. Wohl  
**Outcome: \$16,327; Summer 2009**
- 2008 Mellon International Faculty Seminar, Elizabethtown College Iceland and Denmark, **Summer 2008**
- 2008 Merit Award in the area of Service, Elizabethtown College
- 2007 (Oct) National Institute of Health: AREA: “Do intravenous antibiotics during delivery affect the development of infantile atopic dermatitis?” Amended vs. 1  
PIs: Wohl, D.L. (co-Investigator: William Curry, M.D.)  
**Outcome: \$197,841; 2008-2011**
- 2007 Merit Award in the area of Scholarship, Elizabethtown College
- 2007 (Feb) National Institute of Health: AREA: “Do intravenous antibiotics during delivery affect the development of infantile atopic dermatitis?”  
PIs: Wohl, D.L. (co-Investigator: William Curry, M.D.)  
Outcome: not funded
- 2006 Student Challenge Award Program, Earthwatch Institute: “Mapping antibiotic resistant bacteria across a landscape”  
PIs: Bowne, D.R. and D.L. Wohl  
**Outcome: \$15,895; Summer 2007**
- 2006 Awarded the Editor’s Choice Award by the American Society for Microbiology for the MicrobeLibrary publication, “Exploring Microbial Diversity through a Microbe Collection”
- 2005 Elizabethtown College Faculty Grant: “Biodiversity and ecosystem function in response to anthropogenic disturbance.”  
PIs: Wohl, D.L.  
**Outcome: \$3500; 2005-2006**
- 2004 Howard Hughes Medical Institute’s 2004 Undergraduate Science Education Grant  
Submitted by: University of Richmond  
(*Significantly contributed to the formulation & writing of this grant*)  
Outcome: \$900,000

**Grants & Awards:**

- 2004 Hewlett-Packard Mobile Computing  
PIs: Shocknecht, P., D. Wohl, M. Hamm, & M. Fetea  
Outcome: not funded
- 2003 (Jul) NSF, Division of Biological Sciences: CAREER: "CAREER: Biodiversity and ecosystem function in response to anthropogenic disturbance"  
PIs: Wohl, D.L.  
Outcome: not funded; 2004-2009
- 2003 Jeffress Memorial Trust Renewal: "The importance of functionally redundant species on an ecosystem process"  
PIs: Wohl, D.L.  
**Outcome: \$10,000; 2003-2004**
- 2001 NSF, Division of Undergraduate Education: Course, Curriculum, and Laboratory improvement (CCLI): "Discovering Science through Microbiology: Biology for Majors, Non-science Majors, and High School students"  
PIs: Wohl, D.L., P. Lessem, & J. Reed  
**Outcome: \$144,813; 2002-2004**
- 2002 Jeffress Memorial Trust Renewal: "The importance of functionally redundant species on an ecosystem process"  
PIs: Wohl, D.L.  
**Outcome: \$10,000; 2002-2003**
- 2001 Virginia Water Resources Research Center (VWRRC): "Examination of Poly(beta-hydroxybutyrate) Reserves in Prokaryotes for use as a Bioindicator of Aquatic Ecosystem Health"  
PIs: Wohl, D.L.  
Outcome: Not funded
- 2000 Jeffress Memorial Trust: The importance of functionally redundant species on an ecosystem process"  
PIs: Wohl, D.L.  
**Outcome: \$26,960; 2000-2001**
- 1999-2001 University of Richmond Research Grant & Summer Fellowship  
PIs: Wohl, D.L.  
**Outcome: \$9888**
- 2000 NSF, Division of Environmental Biology: Biocomplexity: "Biocomplexity Modeling of Salt Marsh Productivity"  
PIs: Debra Wohl (University of Richmond)  
Partner institutions: George Mason University (Pat Gillevet), American Type Culture Collection, and University of Virginia  
Outcome: not funded
- 1997 Sigma Xi, Grants-in-Aid of Research: **\$655**
- 1996-1999 U.S. Department of Energy/Savannah River Ecology Laboratory Graduate Fellowship (1996-1999): Competitive fellowship; awards three years tuition waiver and 12 month stipend

**Professional Societies:**

Ecological Society of America  
 International Society of Microbial Ecology  
 American Society for Microbiology  
 Sigma Xi  
 Regional Microbiology Educators Network

**Reviewer:**

Jeffress Memorial Trust (External Reviewer, 2009)  
 National Science Foundation, Systematics Biology & Biodiversity program (External Reviewer, 2009)  
*Biotropica* (2007)  
*Ecology* (2005, 2006)  
*Nature* (2005)  
 Pennsylvania Academy of Science, Grant Proposals (2005, 2008, 2009)  
 American Society for Microbiology, Microbe Library Curriculum (2004-2005)  
 National Science Foundation Microbial Observatories/Microbial Interactions and Processes program (External Reviewer)  
 Virginia Junior Academy of Sciences (External evaluator of papers, April 2003)  
 National Science Foundation: Division of Undergraduate Education – Course, Curriculum, Laboratories and Improvement: Educational Materials Development (Panel Review, January 2003)  
 National Science Foundation: Division of Undergraduate Education - Course, Curriculum, Laboratories and Improvement: Adaptation & Implementation (Panel Review, July 2002)  
 Sigma Delta Epsilon/Graduate Women In Science (External evaluator of grants, April 2002)

**Master's Thesis Committees** (done prior to Fall 2003):

1999-2000 University of Richmond, John Jordan

**Mentor for Undergraduate Students:**

2013 Gates Failing, Elizabethtown College  
 2013 Jessica Albrecht, Elizabethtown College  
 2013 Dylan Carmichael, Elizabethtown College  
 2013 Taylor Olian, Elizabethtown College  
 2011-2012 Betsy Michel, *Elizabethtown College Honors*  
 2011-2012 Kira Blome, Elizabethtown College  
 2011-2012 Zachary Wendler, Elizabethtown College  
 2010-2012 Brittany Daiutolo, Elizabethtown College  
 2010-2012 Liesl Sieber, Elizabethtown College  
 2011 Muhammad Arslan Rashid, Elizabethtown College  
 2010-2011 Allie Martin, Elizabethtown College  
 2010 Brittany Kuperavage, Elizabethtown College  
 2009 Katie Diamond, Elizabethtown College  
 2009-2011 Kaitlyn Snyder, *Elizabethtown College, Honors in the Discipline*  
 2008-2010 Stephanie Dougherty, Elizabethtown College  
 2008-2009 Jason Matakas, *Elizabethtown College, Honors in the Discipline*  
 2008-2009 Ryan McDonald, Elizabethtown College  
 2008-2009 Kaitlyn Wieland, Elizabethtown College  
 2008 Katherine Heisler, Elizabethtown College  
 2007-2008 Marisa Cassidy, Elizabethtown College  
 2007-2008 Suren Rajakuruna, Elizabethtown College



**Mentor for Undergraduate Students (continued):**

2006-2007	Amy Valkovec, Elizabethtown College
2006-2007	Christina Hurst, <i>Elizabethtown College Honors</i>
2006-2007	Valerie Bawell, <i>Elizabethtown College Honors</i>
2005-2007	Emily Ward, Elizabethtown College
2005-2006	Jignasha Patel, Elizabethtown College
2005-2006	Abbas Alibhoy, <i>Elizabethtown College, Honors in the Discipline</i>
2005	Diana Consoli, Elizabethtown College
2004-2005	Jessie Cromley, <i>Elizabethtown College, Honors in the Discipline</i>
2003-2004	Joanna Bounds, University of Richmond
2003	Natasha Corbitt, Howard University
2003	Jessica Rackley, University of Virginia
2003-2004	Lily Hayes, <i>Honors Thesis</i> , University of Richmond
2002-2003	Elizabeth Cook, <i>Honors Thesis</i> , University of Richmond
2002-2003	Paul Matri, University of Richmond
2002	Kristen Bandura, University of Richmond
2002, 2003-2004	Jon Romash, University of Richmond
2002	Neli Martcheva, University of Richmond
2001-2001	Anne Huntington, University of Richmond
2001-2002	Sabrina Joseph, University of Richmond
2001	Satyam Arora, University of Richmond
2000-2001	Jessica Gladstone, University of Richmond

**Student Grants:**

Gates Failing (2013 summer)	\$1000
The Microbiome of the Built Environment.	
Funding source: Distinguished Student Achievement Award, Elizabethtown College	
Ryan McDonald (2008)	<i>not funded</i>
Spatial Analysis of Heavy Metal Concentrations and Corresponding Antibiotic Resistance in <i>Enterobacter</i> spp. of Lancaster County	
Funding source: Sigma Xi Grants-in-Aid of Research	
Jason Matakas (2008)	\$350
Function of Atu2115 in <i>Agrobacterium tumefaciens</i> .	
Funding source: Tri-Beta National Honor Society	
Christina Hurst (2006)	<i>not funded</i>
Randomly amplified polymorphic DNA (RAPD) analysis of microbial communities from varying stream habitats along the Conewago Creek	
Funding source: Sigma Xi Grants-in-Aid of Research	
Amy Valkovec (2006)	<i>not funded</i>
Spatial analysis of <i>Pseudomonas aeruginosa</i> antibiotic resistance in Elizabethtown soils	
Funding source: Sigma Xi Grants-in-Aid of Research	
Abbas Alibhoy (2005)	\$564
The distribution of <i>Erwinia amylovora</i> , the causative agent of Fireblight, in orchard soils	
Funding source: Sigma Xi Grants-in-Aid of Research	
Joanna Bounds (2004)	\$300
Macroinvertebrate community dynamics in relation to sewage effluent	
Funding source: University of Richmond Undergraduate Research Funds	
Jon Romash (2004)	\$200
The distribution of cellulose degrading bacteria relative to a sewage effluent	
Funding source: University of Richmond Undergraduate Research Funds	

**Student Grants (Cont'):**

Lily Hayes (2003)	\$500
Antibiotic resistance in aquatic bacteria	
Funding source: University of Richmond Undergraduate Research Funds	
Elizabeth Cook (2003)	\$495
Regulation of cellulose in three microbial isolates	
Funding source: University of Richmond Undergraduate Research Funds	
Paul Matri (2003)	\$500
The effects of temperature fluctuations on an ecosystem process	
Funding source: University of Richmond Undergraduate Research Funds	
Sabrina Joseph (2002)	\$485
The effects of varied environmental factors on an ecosystem process	
Funding source: University of Richmond Undergraduate Research Funds	
Anne Huntington (2001)	\$500
The effects of temperature fluctuations on an ecosystem process	
Funding source: University of Richmond Undergraduate Research Funds	
Satyam Arora (2001)	<i>Merck/AAAS Fellowship</i>
The importance of functionally redundant species on an ecosystem process	
Funding source: Merck/AAAS Fellowship	
Satyam Arora (2001)	\$500
A comparative laboratory study of 16S rRNA extraction methods for bacterial isolates	
Funding source: University of Richmond Undergraduate Research Funds	
Jessica Gladstone (2000, 2001)	\$522, \$500
Cellulose degradation by bacteria in local microenvironments	
Funding source: University of Richmond Undergraduate Research Funds	

**Collaborators & Other Affiliations:**Collaborators:

William J. Curry, Hershey Medical Center  
 Linda Blum, University of Virginia  
 David Bowne, Elizabethtown College  
 Patrick Gillevet, George Mason University  
 Paula Lessem, University of Richmond  
 J Vaun McArthur, University of Georgia  
 Julia Reed, Greater Richmond Area Health Education Center

Graduate & PostDoctoral Advisors:

Linda Blum	Post-doctoral Advisor
J Vaun McArthur	Graduate Advisor (Ph.D.)
J. Bruce Wallace	Graduate Advisor (M.S.)

**Service:**

2013-2014	Buddy Bungalow, SDLC Advisor
2013	Goldwater Scholarship Committee
2013	High School Science Fair Mentor, Maya Rao (1st place in Environmental Science and awarded the Stockholm Junior Water Supply Auxiliary Award)
2011	Presidential Transition Team
2010-2011	Faculty Mentor for new faculty (Dr. Jean Pretz, Psychology)
2009-2010	Mentor for St. Peter's Science Fair Project: Marissa Rankin, <i>Honorable Mention</i>
2009-2012	Executive Council (2009-10 AC Rep, 2010-12 Secretary)
2008	Collaborative Interdisciplinary Scholarship Program (CISP) Committee
2008 (11/5 <sup>th</sup> & 7 <sup>th</sup> )	Power Point Dos & Don'ts Workshop sponsored by CETL & PDC

**Service (Cont<sup>2</sup>):**

- 2008 Search Committee for the Director of Foundation and Government Relations
- 2007 Mentor for Hempfield High School Science Fair Project: Carlos Gonzalos
- 2007 (Oct 19<sup>th</sup>) Effective Grant Writing Workshop sponsored by CETL & PDC
- 2007 – 2008 Ad Hoc Committee on Integrity
- 2007 – 2008 Academic Review Board
- 2007 – 2010 Academic Council (AC), *Secretary (2007-2008), Vice-Chair (2008-2009), Chair (2009-2010)*
- 2007 – 2009 Middle States Self Study Evaluation, Faculty subcommittee
- 2007 Organizer for T.A.L.C. (Teaching and Learning Conversations)
- 2006 – 2010 Lancaster Osteopathic Foundation Scholarship Committee
- 2006-2009 Professional Development Committee (PDC), *Chair (2008, 2009)*
- Jan. 2006 Session Moderator at the Elizabethtown College Teaching Workshop
- 2005 Mentor for Hempfield High School Science Fair Projects:  
Jeffrey Chhim, Michelle Chu
- 2005-present Health Professions Advisory Committee
- Aug. 2005 Faculty Instructor for SIFEdicus Summer Science Camp
- 2005-present Advising @ Elizabethtown College (declared Biology majors)
- 2005 Participant in Council of Undergraduate Research (CUR) review
- 2005-present Participant in Department Day & Scholarship Reception
- 2000-2004 Advising at University of Richmond (declared Biology majors and undeclared)
- 2000-2003 Honorary Degrees Committee, CHAIR, University of Richmond
- 2003-2004 Environmental Studies Committee
- 2003 Judge, University of Richmond's Undergraduate Research Symposium
- 2002-2004 Undergraduate Research Committee, University of Richmond
- 2003-2004 University of Richmond's Audit of the Environment, Advisory Committee
- 2003-2004 Microbiology Seminar Series
- 2003-2004 Development of Evolution & Diversity course [Bio 202]
- 2003 Judge for the 18<sup>th</sup> Annual Virginia State Science and Engineering Fair
- 2003-2004 Power Outage Committee, University of Richmond
- 2001, 2002 Summer Lunch-time Seminar Series, University of Richmond
- 2002, 2003 Smart-Dickinson Committee, University of Richmond
- 2001-2002 Coordinator of Biology Seminar Series, University of Richmond
- 2001-2002 Academic Computing Committee, University of Richmond
- 2001, 2002 University of Richmond's Annual Community Service Day
- 2000 Internship Committee, University of Richmond

**Additional Student-based Research Projects that I have mentored resulting in presentations at Elizabethtown College's Scholarship and Creative Arts Day:**

**2012**

Daiutolo, Brittany and Zach Wendler. Determining Ampicillin Resistance Characteristics of Gram-negative Bacteria in 3 Elizabethtown Habitats.

Sturm, Melanie and Kira Blome. The Ability of Antibiotic-Sensitive Bacteria to Acquire Ampicillin Resistance through Exposure to Cadmium.

Sieber, Liesl. Itching for Answers: Antibiotic Use During Delivery and Atopic Dermatitis (in collaboration with Co-PIs from Penn State College of Medicine: W.J. Curry and J. Miller)

Michel, Betsy. Relative Quantities of Bacterial DNA within the Probiotic VSL#3.

**2011**

Snyder, K.N. Effects of Antibiotic Exposure and Immune System Challenge on the Development of Allergic Asthma. (in collaboration with Co-PIs from Penn State College of Medicine: W.J. Curry, J. Miller)

**2010**

Dougherty, Stephanie. E. and Kaitlyn N. Snyder. Itchy? Your Birth Day May be to Blame. (in collaboration with Co-PIs from Penn State College of Medicine: W.J. Curry and J. Miller)

**2008**

Suren Rajakaruna. The Effects of Pesticides on Anti-Bacterial Resistance.

**2007**

Bawell, Valerie. Only Scratching the Surface: A Literature Review on Atopic Dermatitis

**Additional Student-based Research Projects that I have mentored resulting in presentations at University of Richmond's Undergraduate Research Symposium:**

**2004**

Clark, E. and M. Morgan. Presence of endospores in *Bacillus* increases antibiotic resistance to streptomycin.

Hayes, L. and J. Romash. Antibiotic resistance in aquatic bacteria.

Honigbaum, S. and K. Cerniglia. Horizontal transfer of resistance genes from unknown lake bacteria (Organism B) to *Micrococcus luteus*.

Kahntroff, S. and A. Boyle. Investigation of the effects of heat stress on the antibiotic resistance of bacterial specimens from the University of Richmond Westhampton Lake.

Kimball, N. and A. Maul. The effect of UV radiation on antibiotic resistance

Matri, P. and R. Sanders. The effects of microbial diversity on antibiotic resistance.

Pinkos, B., L. Miller and K. Logan. Antiseptic sensitivity of common mouth bacteria to mouthwashes

Romash, J., K.C. Dietz, and E. Chalk. Antibiotic resistance reversal using Lamilarin O.

**2003**

Mullins, M., K. Baylor, P. Turano, W. Wells, C. Wevodeau, J. Stern, and A. Goppert.

Determination of the minimum inhibitory concentrations (MIC) for selected antibiotics using Rayon Park isolates

Cunningham, W., N. Butnar, K. Simmeron, C. Klein, L. Mondo, L. Lumsden, and M. Wolfgram. The effect of Rayon Park water on *Staphylococcus aureus* 9144's antibiotic resistance.

Griffin, K., K. Hackett, A. Jeannotte, and B. Wingard. Inducing Antiseptic resistance in a Rayon Park Isolate by growth in heavy metals.

- Liefer, L., K. Vesper, and S. Sikora. The location of an antibiotic resistance gene in *Pseudomonas*.
- Hendryx, D., M. Lipper, and S. Weed. Polymixin B resistance in *Pseudomonas* isolated from Rayon Park and cultured in the absence of antibiotics.
- Dupont, J., C. Rodgers, and K. Winslow. The induction of VBNC state in the presence of various antibiotic concentrations.
- Lukens, J., R. DeMartino, D. Berkholz. The effect of a Ningalin B precursor on tetracycline-induced multiple drug resistance in *Pseudomonas aeruginosa* and a Rayon Park isolate.
- Wolf, M., V. Daoud, and C. Musetti. Can normal soap use induce antibiotic resistance?
- 2002**
- Camp, N., K. Lane, and M. Robertie. The occurrence of cross-resistance in *E. coli*.
- Cavannah, K., A. Huntington, and S. Ungerer. An investigation of mercury resistant microorganisms in three different environments.
- Clements, C., E. Galvin, and E. Cook. Comparison of Ampicillin resistance and presence of  $\beta$ -lactamase genes (Bla Z & Bla TEM) in the James River and Westhampton Lake isolates.
- Dameron, W., H. Wyre, and E. Pala. Analysis of the RpoB gene in Rifampicin-resistant and – sensitive *E. coli*.
- Elkins, C. Penicillin and Vancomycin resistance in *Staphylococcus* spp. From the James River.
- Joseph, S., R. Mentz and M. Mondello. Eye on *E. coli*: RAPD's on antibiotic resistant *E. coli* from Westhampton Lake and Bryan Park.
- Rofe, A. Ampicillin resistance in *Escherichia coli* due to mutations in the  $\beta$ -lactamase gene.
- Yanek, K. Antibiotic resistance patterns of fecal *Streptococcus* inhabiting Westhampton Lake.
- 2001**
- Arora, S. and D.L. Wohl. A comparative laboratory study of 16S rRNA extraction methods for bacterial isolates.
- Gladstone, J.R. and D.L. Wohl. Cellulose degradation by bacteria in local microenvironments.