

Jeanne Kagle, Ph.D.

Mansfield University
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Full Professor
Department of Biology

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Education

Ph.D. Cornell University, Ithaca, NY.

1999 - 2004

Microbiology

Minors: Biochemistry and Education.

B.A. Swarthmore College, Swarthmore, PA.

1995 -1999

Biology

Teaching Experience

Full Professor. *Fall 2015 - Present.* **Associate Professor.** *Fall 2009 – Spring 2015.* Mansfield University, Mansfield, PA.
Teaching responsibilities include Microbiology for the Health Sciences (lecture and laboratory), General Microbiology (lecture and laboratory), and Genomics.

Assistant Professor. *Fall 2004 – Spring 2009.* Mansfield University, Mansfield, PA.

Teaching responsibilities included nonmajors' General Biology (lecture and laboratory), Microbiology for the Health Sciences (lecture and laboratory), and Environmental Microbiology (lecture and laboratory).

University Service

Assistant to the Provost. *Spring 2018.* Responsibilities included assisting departments with program development, Provost's representative on university committees, and coordination of university-wide Showcase of Student Scholarship and Dean's faculty awards.

Academic Planning Committee, Elected Member. *Fall 2013 – present.* **Chair.** *Fall 2014 – Spring 2016.*

Mansfield Representative to Pennsylvania State System of Higher Education (PASSHE) Diversity and Inclusion in STEM-H Meeting. *October 20, 2017 (with ongoing follow-up).* Met with representatives from all PASSHE schools to discuss possible initiatives to improve diversity and inclusion in STEM-H at our universities. Currently co-leading STEM-H diversity and inclusion initiatives on the Mansfield University campus.

CATL (Center for the Advancement of Teaching & Learning) Committee, Founding Member. *Fall 2013 – present.*

General Education Assessment Team. *Fall 2012 –present.*

PASSHE Teaching and Learning Conference, Mansfield Representative. *Summer 2012 and Summer 2013.*

PASSHE Innovative Teaching Conference, Mansfield Representative. *Fall 2012 and Fall 2013.*

Middle States Assessment Working Group, Appointed Member. *Fall 2010 – Spring 2012.*

Assisted in collecting and analyzing documents and data concerning assessment at Mansfield University in preparation for the Middle States Accreditation visit in Spring 2012.

Campus Safety and Sustainability Strategic Plan Implementation Team, Member. *Fall 2009 – Spring 2012.* **Co-Chair** *Fall 2011-Spring 2012.*

Charged with facilitating implementation of Goal VII of the 2008-2013 Strategic Plan: Create a safe and sustainable campus environment to facilitate learning.

General Education Restructuring Committee, Elected Member. *Fall 2009 – Spring 2011.*

Charged with examining the Mansfield University general education program and, if necessary, proposing alternatives which would be approved by faculty vote. The resulting restructured general education program was implemented in the Fall 2011 semester.

Mansfield University Center for the Advancement of Teaching and Learning (CATL), Director. *Summer 2008 – Spring 2011.*

Responsible for maintaining CATL website, developing programs for teaching skills refinement and recognition, and providing teaching-related resources for faculty.

Mansfield University Biology Department Assessment Committee, Appointed Member. *Spring 2007 – present.*

The purpose of the Assessment Committee is to establish departmental learning goals and to develop effective assessments of those learning goals.

Mansfield University Faculty Professional Development Committee, Appointed Member. *Summer 2006 – Spring 2012. Chair Fall 2011- Spring 2012.*

MU FPDC is charged by the Provost to disburse funds available for faculty and student professional development and faculty- student research support.

Mansfield University General Education Subcommittee, Elected Member. *Fall 2005 – Spring 2011.*

The General Education Subcommittee (GES) oversees the General Education Program. GES considers changes to the program and forwards program changes to the Academic Affairs Committee.

Grants & Honors

Visiting Instructor at China Pharmaceutical University, Nanjing. *July 4-11, 2016.*

Taught a 16-hour course on “Antibiotics, Resistance, and Alternatives” to undergraduate pharmacy students.

Pennsylvania State System of Higher Education (PASSHE) FPDC Faculty Research Grant. *Spring 2014 – Fall 2015.*

Awarded by the Pennsylvania State System of Higher Education (PASSHE) for the project titled “Comparative Genomics and Growth Characteristics of Phototrophs in the Bacterial Genus *Sphingomonas*”

NSF Grant in the Symbiosis, Defense and Self-recognition program. *2014-2017.*

Collaborator with Principal Investigator Dr. Angela Douglas. Portion of grants will fund bringing Mansfield students to Cornell University to perform genomics research.

Outstanding Senior Mentor Award. *2013.* Nominated by David Glasbrenner.

Mansfield University Course Innovation and Development Grant. *Summer 2011 –Fall 2011.*

Funding to develop interactive StarBoard learning activities for Biology and Microbiology.

PASSHE FPDC Faculty Research Grant. *Spring 2009 – Fall 2010.*

Awarded by the Pennsylvania State System of Higher Education (PASSHE) for the project titled “Sequencing, Annotation, and Experimental Confirmation of Genes Involved in the Metabolism of Triclosan by *Sphingomonas* sp. Strain RD1”. With Dr. Brian King and student Precious Grinnage.

Pennsylvania Department of Environmental Protection Environmental Education Grant. *Fall 2008 – Spring 2009.*

Funding awarded for the development and implementation of an acid mine drainage curriculum for high school students encompassing preparatory lessons, a field trip, and follow up lessons. In collaboration with Mansfield University faculty John Kirby (Biology), Gregory Carson (Chemistry), and Jennifer Demchak (Geography & Geology).

MU FPDC Alternate Work Assignment. *Fall 2007.*

One-quarter teaching load release time awarded by Mansfield University for “Preparation of a Journal Article Reporting the Effects of Acid Mine Drainage on Bacterial Populations”. With student Whitney Honey.

PASSHE FPDC Non-Tenured Faculty Research Grant. *Spring 2007 – Fall 2008.*

Awarded by the Pennsylvania State System of Higher Education (PASSHE) for the project titled “Survey of Environmental Bacteria for the Ability to Convert Vegetable Oil to Biodiesel”. With student Cynthia Carlineo.

NSF Summer Workshop at Governors State University. *Summer 2006.*

Nationally, 24 participants were selected to attend this teaching workshop “Addressing Environmental Problems to Stimulate Undergraduate Learning.”

Mansfield University (MU) Faculty Professional Development Committee (FPDC) Faculty-Student Research, Research, and Travel Grants. *Spring 2005 - Fall 2008.*

A total of 12 grants awarded by the Mansfield University FPDC for faculty-student research and travel to present research at regional conferences.

American Society for Microbiology (ASM) Conference for Undergraduate Educators (CUE) Early Career Travel Grant. *Summer 2005.*

Granted to promising new faculty by the American Society for Microbiology (ASM) for travel to the ASM Conference for Undergraduate Educators (ASMCUE).

Howard Hughes Medical Institute (HHMI) Predoctoral Fellow. *Fall 1999 – Summer 2004.*

Awarded by the Howard Hughes Medical Institute for full support of study leading to Ph.D.

Publications

Kagle, J.M., C. Paxson, P. Johnstone, A.G. Hay. 2015. Identification of a gene cluster associated with triclosan catabolism. *Biodegradation*. 26(3): 235-246.

Newell, P.D., J.M. Chaston, Y. Wang, N.J. Winans, D. Sannino, C. Wong, A.J. Dobson, J. Kagle, A.E. Douglas. 2014. In vivo function and comparative genomic analyses of the *Drosophila* gut microbiota identify candidate symbiosis factors. *Frontiers in Microbiology*. 5: 576. doi: 10.3389/fmicb.2014.00576.

Honey, W., T. Yenilaitus, and J. Kagle. 2013. Analysis of the Impact of Acid Mine Drainage on Bacterial Populations in the Upper Tioga Watershed. *Journal of the Pennsylvania Academy of Sciences*. 87: 34-41.

Kagle, J., J.M. Chaston, P.D. Newell, C. Wong., and A.E. Douglas. 2012. Draft Genome Sequence of *Lactobacillus plantarum* DmelCS_001, isolated from the Gut of *Drosophila melanogaster* Canton S. Open Access: <http://www.angeladouglasslab.com/bacterial-genomes.html>.

George, Kevin W., J. Kagle, L. Junker, A. Risen, and A. G. Hay. 2011. Growth of *Pseudomonas putida* F1 on styrene requires increased catechol-2, 3-dioxygenase activity, not a new hydrolase. *Microbiology*. 157(1): 89-98.

Kagle, J., A.W. Porter, R.W. Murdoch, G. Rivera-Cancel, and A.G. Hay. 2009. Biodegradation of pharmaceutical and personal care products. *Advances in Applied Microbiology*. 67: 66-108.

Kagle, J. and A.G. Hay. 2007. Microbial Evolution is in the Cards: Horizontal Gene Transfer in the Classroom. *American Biology Teacher*. 69(1): 24-28.

Kagle, J. and A.G. Hay. 2006. Phenylacetylene reversibly inhibits the phenol hydroxylase of *Pseudomonas* sp. CF600 at high concentrations but is oxidized at lower concentrations. *Applied Microbiology and Biotechnology*. 72(2): 306-315.

Kagle, J. 2006. Increasing Motivation in a Nursing Microbiology Course by Studying Microbes with a Personal Relevance. *Focus on Microbiology Education*. 12(2): 15-17.

Kagle, J. and A.G. Hay. 2002. Construction of a Broad Host-Range Vector Conferring Triclosan Resistance. *Biotechniques*.33(3): 490-492.

Invited Talks

Small Talk: Chemical Conversations with Bacteria.

American Chemical Society, Corning Section. Corning, NY. March, 2017

Down the drain: The environmental fate of pharmaceuticals and personal care products.

American Chemical Society, Corning Section. Corning, NY. December, 2011.

Effects of Acid Mine Drainage on Bacterial Populations.

Alfred University. Alfred, NY. October, 2006.

Wells College. Aurora, NY. February, 2007.

Poster Presentations (Peer-Reviewed)

Putt, A.D. and J. Kagle. 2017. Detection of the Putative Triclosan Oxygenase Gene *tcsA* in Wastewater Treatment Plants. *ASM Microbe* 2017.

Abraham, S. and J. Kagle. 2013. Effect of Triclosan Soap on Diversity of Triclosan-Resistant Bacteria on Hands. 89th Annual meeting of the Pennsylvania Academy of Science.

Carlineo, C. and J. Kagle. 2008. Survey of Bacterial Isolates for Lipase Activity. 108th General Meeting of the American Society for Microbiology.

Honey, W. and J. Kagle. 2008. Analysis of the Impact of Acid Mine Drainage on Bacterial Populations in the Upper Tioga Watershed. 108th General Meeting of the American Society for Microbiology.

Kagle, J. 2006. Using Photographic Collections to Teach Environmental Impact of Microbial Activity in a General Microbiology Course. 106th General Meeting of the American Society for Microbiology.

Kagle, J. and A.G. Hay. 2005. Evidence for Metabolism of Styrene by *Pseudomonas putida* F1 beyond 2-Hydroxy-6-Oxo-Octa-2,4,7-Trienoic Acid. 105th General Meeting of the American Society for Microbiology.

Kagle, J. and A.G. Hay. 2003. Molecular Characterization of Oxygenases from the Triclosan-Mineralizing Bacterium *Sphingomonas* sp. RD1. 103rd General Meeting of the American Society for Microbiology.

Kagle, J. and A.G. Hay. 2002. Induction of Triclosan Degradation in *Sphingomonas* sp. RD1. 102nd General Meeting of the American Society for Microbiology.

Kagle, J. and A.G. Hay. 2001. Correlation between Mineralization of and Resistance to the Antimicrobial Agent Triclosan. 101st General Meeting of the American Society for Microbiology.

Poster Presentations (Not Peer-Reviewed)

Kagle, J. and H. Chester. 2015. Comparative Genomics of Putative Phototrophs in the Genus *Sphingomonas*. *North Eastern Microbiologists: Physiology, Ecology, and Taxonomy*.

Kagle, J. 2014. Assessment of Selected *Sphingomonas* Species for Characteristics of Aerobic Anoxygenic Phototrophy. Allegheny Branch of the American Society for Microbiology.

Nassar, A. and J. Kagle. 2012. Effect of Triclosan-Containing Soap on Triclosan Resistance and Antibiotic Cross-Resistance of Bacteria Found on Hands. North Eastern Microbiologists: Physiology, Ecology, and Taxonomy.

Paxson, C. and J. Kagle. 2011. Identification of a putative triclosan oxygenase in *Sphingomonas* sp. RD1. Allegheny Branch of the American Society for Microbiology.

Kagle, J. and B. King. 2010. Identification of a Putative Chlorocatechol Catabolic Pathway in the Triclosan Degradation *Sphingomonas* sp. RD1. North Eastern Microbiologists: Physiology, Ecology, and Taxonomy.

Honey, W. and J. Kagle. 2007. Analysis of the Impact of Acid Mine Drainage on Bacterial Populations in the Upper Tioga Watershed. Second Annual Susquehanna River Initiative Symposium.

Professional Memberships

American Society for Microbiology. 2000 – present.

National Association of Biology Teachers. 2003 – 2007.

Professional Activities

The Reagent Project. Board Member. Spring 2016-present.

Environmental Sciences Advisory Board of Corning Community College. Member. Spring 2013-present.

PASSHE Virtual Conference Committee. Member. Summer 2013 – present.

Biodegradation Journal Peer Reviewer. Spring 2011.

Commonwealth of Pennsylvania University Biologists (CPUB) Poster Presentation Judge. Spring 2008.
Judged Molecular and Cellular Biology research posters at the 2008 meeting of CPUB.

American Society for Microbiology Conference for Undergraduate Educators (ASMCUE). Spring 2007.
Peer-reviewed abstracts submitted for poster presentation at the 14th annual conference.

MicrobeLibrary Photographic Collection. 2006 – present.
Peer-review visual resources relating to environmental microbiology and microbial ecology.

Strelkauskas, Microbiology for the Health Care Professional. Fall 2006.
Reviewed selected chapters of new microbiology textbook for allied health majors being considered for publication by John Wiley & Sons, Inc.

Community Service

IDEAS Day at Mansfield University. 2016, 2017, 2018.
Developed and ran hands-on microbiology activities for 4th-6th graders.

Rosalind Franklin Science Forum at the Alternative School for Math and Science. May 21, 2013 and May 20, 2014.
As a panel member, listened to student presentations of their science fair projects and provided feedback. Also, answered questions about being a scientist.

Families Explore at Corning Museum of Glass. Fall 2010.

Attendees looked at nonpathogenic microorganisms from common places using light microscopes, dissecting microscopes, petri plates and pictures.

Tioga County Concerned Citizens Committee (TCCCC), Joint Watershed Committee. 2005-2013.

Member of the committee representing Mansfield University. Also assisted members of the TCCCC in taking high school students to acid mine drainage-impacted sites and teaching them about acid mine drainage formation and impacts (Fall 2006 and Fall 2007).

Undergraduate Research Students

Krystal Lefever. Spring 2018-present. Effectiveness of essential oils for biofilm removal.

Mareca Lodge. Spring 2017 – Fall 2017. Effect of Tobacco Chewing on the Population Size of Oral *Streptococcus mutans*.

Jessica Towey. Spring 2017 – Spring 2018. Bacterial Functional Gene Profiling for Forensic Soil Identification.

Rachael Sterner. Spring 2017 – Fall 2017. Synergistic Toxicity of Carbamazepine, Fluoxetine, and Benzalkonium Chloride on Murine Fibroblasts. (Co-Advised with Dr. Kristen Long)

Andrew Putt. Summer 2016 – Fall 2016. Detection and monitoring of triclosan degradation gene expression *in situ*.
Funding: ASM Undergraduate Research Fellowship.

Fall 2015-Spring 2016. Identification of bacterial iron oxidizers for mine drainage treatment.
Publications/Presentations: Poster presentation at ASM Microbe 2017.
Oral presentation at the annual meeting of the Commonwealth of Pennsylvania University Biologists (First Place in Session).

Alexandria Gallagher. Fall 2015-Spring 2016. The effects of low levels of ciprofloxacin on *Pseudomonas fluorescens*
Publications/Presentations: Oral presentation at the annual meeting of the Commonwealth of Pennsylvania University Biologists (First Place in Session).

Joshua Mihalik. Spring 2014-Spring 2015. Research: Distribution of Phototrophy and Pigmentation within the Genus *Sphingomonas*.

Michelle McKissick. Spring 2013 – Spring 2015. Research: Determination of optimal conditions for endospore germination in *Bacillus cereus*.

David Glasbrenner. Fall 2012 – Spring 2013. Research: Determination of optimal growth of *Magnetospirillum magnetotacticum* and formation of nanomagnets in varying environmental conditions
Publications/Presentations: Oral presentation at the annual meeting of the Commonwealth of Pennsylvania University Biologists (First Place in Session).

Sherin Abraham. Fall 2012 – Spring 2013. Research: Effect of Triclosan Soap on Diversity of Triclosan-Resistant Bacteria on Hands
Funding: Awarded \$250 grant from Pennsylvania Academy of Science.
Publications/Presentations: Poster presentation at 89th Annual meeting of the Pennsylvania Academy of Science.

Nichole Eshelman. Spring 2012 – Spring 2013. Research: Determination of optimal toluene concentration for growth and activity of toluene-degrading bacteria in soil.
Publications/Presentations: Poster presentation at the annual meeting of the Commonwealth of Pennsylvania University Biologists (First Place in Session).

- Alisha Burgess.** *Fall 2011 – Spring 2012.* Research: Characterization of the putative bacterial fish pathogen CBJJ.
- Amanda Nassar.** *Fall 2011 – Spring 2012.* Research: Effect of Triclosan-Containing Soap on Triclosan Resistance and Antibiotic Cross-Resistance of Bacteria Found on Hands.
Publications/Presentations: Poster presentation at North Eastern Microbiologists: Physiology, Ecology, and Taxonomy
- Clayton Paxson.** *Summer 2011 – Fall 2011.* Research: Identification of a triclosan oxygenase in the triclosan-degrading bacterium *Sphingomonas sp.* RD1.
Publications/Presentations: Poster presentation at Allegheny Branch of the American Society for Microbiology (First Place in Session)
- Emeka Anosike.** *Fall 2010 – Spring 2012.* Research: Identification of genes responsible for growth of a mixed culture on penicillin.
- Precious Grinnage.** *Spring 2010 – Spring 2011.* Research: Induction of putative 4-chlorocatechol catabolic genes in *Sphingomonas sp.* RD1 by triclosan.
- Jeannette Meacham.** *Fall 2009 – Spring 2010.* Research: Determination of the efficacy of disinfection procedures on *Staphylococcus aureus* in the Kelchner Fitness Center, Mansfield University.
- Joy Sampson.** *Fall 2009 – Spring 2010.* Research: Investigation of the role of beta-lactamase in the metabolism of penicillin-G.
- Caitlin Marshall.** *Summer 2009 – Fall 2010.* Research: Characterization of the optimal growth and lipase production conditions for *Pseudomonas sp.* CCA3.
- Nicole Kilbourn.** *Fall 2008.* Research: Isolation and characterization of bacteria capable of using penicillin as their sole carbon source.
- Tracey Yenilaitus.** *Spring 2007 – Spring 2009.* Research: Identification of bacterial species dominant in acid mine drainage-impacted stream sediments.
- Whitney Honey.** *Spring 2007 – Spring 2008.* Research: Effects of acid mine drainage on bacterial communities of stream sediments.
Publications/Presentations: Prepared manuscript for *Aquatic Microbial Ecology*.
Poster presentations at Second Annual Susquehanna River Initiative Symposium and 108th General Meeting of the ASM.
Oral presentations at Mansfield University and the annual meeting of the Commonwealth of Pennsylvania University Biologists (First Place in Session).
- Ronald Wise.** *Spring 2008.* Research: Comparison of acid mine drainage impact and stream order as factors determining bacterial community structure.
- Cynthia Carlineo.** *Spring 2007 – Spring 2008.* Research: Environmental survey of bacterial isolates for lipases capable of efficient conversion of vegetable oil to biodiesel.
Publications/Presentations: Poster presentation at 108th General Meeting of the ASM.
Oral presentations at Mansfield University and the annual meeting of the Commonwealth of Pennsylvania University Biologists (First Place in Session).
- Bart Callear.** *Spring 2007 – Fall 2008.* Research: Development of a computer program for the identification of group-specific DNA sequence homologies.