

Kathryn M. Docherty

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EDUCATION

University of Notre Dame, South Bend, IN
Ph.D., Biological Sciences, January 2007,
Dissertation: "Toxicity and Biodegradability of Ionic Liquids"

Marist College, Poughkeepsie, NY
B.S., Environmental Science/Biology, Magna Cum Laude, May 2001

PROFESSIONAL EXPERIENCE

Aug 2017 - present	Associate Professor. Department of Biological Sciences, Western Michigan University, Kalamazoo, MI
Aug 2011- Aug 2017	Assistant Professor. Department of Biological Sciences, Western Michigan University, Kalamazoo, MI
Aug 2010 – July 2011	Research Associate. National Ecological Observatory Network (NEON, Inc.) Boulder, CO
Aug 2010 – Aug 2011	Research Associate, Center for Ecology and Evolutionary Biology, University of Oregon, Eugene, OR
July 2008 – July 2010	NSF Postdoctoral Research Fellow. Center for Ecology and Evolutionary Biology, University of Oregon, Eugene (Dr. Brendan Bohannon and Dr. Jessica Green, faculty sponsors)
Mar 2007 – July 2008	Postdoctoral Research Associate. Center for Ecology and Evolutionary Biology, University of Oregon, Eugene (Dr. Brendan Bohannon, postdoctoral adviser)
2002-2006	NSF Graduate Research Fellow, Graduate Assistance in Areas of National Need (GAANN) Fellow, Department of Biological Sciences, University of Notre Dame (Dr. Charles Kulpa and Dr. Scott Bridgham, graduate advisers)
2001-2002	Graduate Teaching Assistant. Department of Biological Sciences, University of Notre Dame
1999-2000	Undergraduate Teaching Assistant. Biology Department, Marist College

PUBLICATIONS

After 2011, ¹indicates undergraduate student author; ²indicates graduate student author

- Sihang, Y., Zheng, O., Yang, Y., Yuan, M., Ma, X., Chiariello, N.R., **Docherty, K.M.**, Field, C.B., Gutknecht, J.L.M., Hungate, B.A., Niboyet, A., LeRoux, X., Zhou, J. (2019) Fire affects the taxonomic and functional composition of soil microbial communities, with cascading effects on grassland ecosystem functioning. *Global Change Biology*. 00: 1– 12. <https://doi.org/10.1111/gcb.14852>
- Docherty, K.M.** & Gutknecht, J.L.M. (2019) Soil microbial restoration strategies for promoting climate-ready prairie ecosystems. *Ecological Applications*. 29(3): e01858. <https://doi.org/10.1002/eap.1858>
- Dupuis, D.², Sprague, E.I.², **Docherty, K.M.**, Koretsky, C.M. (2019) The influence of road salt on seasonal mixing, redox stratification and methane concentrations in urban kettle lakes. *Science of the Total Environment*. 661: 514-521. <https://doi.org/10.1016/j.scitotenv.2019.01.191>
- Y. Yang, S., Zheng, Q., Yuan, M., Shi, Z., Chiariello, N.R., **Docherty, K.M.**, Dong, S., Field, C.B., Gu, Y., Gutknecht, J.L.M., Hungate, B.A., LeRoux, X., Ma, X., Niboyet, A., Yuan, T., Zhou, J., Yang. (2019) Long-term elevated CO₂ shifts composition of soil microbial communities in a Californian annual grassland, reducing growth and N utilization potentials. *Science of the Total Environment*. 652: 1474-1481. <https://doi.org/10.1016/j.scitotenv.2018.10.353>
- Docherty, K.M.**, Pearce, D.S.², Lemmer, K.M., Hale, R.L. (2018) Distributing regionally, distinguishing locally: Examining the underlying effects of local land use on airborne bacterial biodiversity. *Environmental Microbiology*. 20(10): 3529-3542. DOI: 10.1111/1462-2920.14307
- Spring, A.M.², Domingue, K.D.², Mooney, M.M.¹, Kerber, T.V.¹, **Docherty, K.M.**, Lemmer, K.M. (2018) A Method for Collecting Atmospheric Microbial Samples from Set Altitudes for Use with Next-Generation Sequencing Techniques to Characterize Communities. *Air, Soil and Water Research*. 11:1-12. DOI: 10.1177/1178622118788871
- Carter, D.L.², **Docherty, K.M.**, Gill, S.A., Baker, K, Teachout, J.¹, Vonnhof, M.J. (2018) Antibiotic resistant bacteria are widespread in songbirds across rural and urban environments. *Science of the Total Environment*. 627: 1234-1241. DOI: 10.1016/j.scitotenv.2018.01.343
- Pearce, D.S.², Hoover, B.², Jenkins, S.², Nevitt, G.A., **Docherty, K.M.** (2017) Morphological and genetic factors shape the microbiome of a seabird species (*Oceanodroma leucorhoa*) more than environmental and social factors. *Microbiome*. 5(1): 146. DOI: 10.1186/s40168-017-0365-4

- Alisawi, W.A.², Rahbarirad, S.², Venter, A.R., Walker, K.A.¹, **Docherty, K.M.**, Szymczyna, B.R. (2017) Identification of Metabolites Generated during the Biodegradation of the Ionic Liquid 1-butyl-3-methylimidazolium Chloride by Activated Sludge Microbial Community. *Chemosphere*. 167: 53-61. DOI: 10.1016/j.chemosphere.2016.09.117
- Docherty, K.M.**, Borton, H.A.², Espinosa, N.², Frost, G.², Gebhardt, M.², Gil-Loaiza, J.², Gutknecht, J.L.M., Maes, P., Mott, B., Parnell, J., Rodrigues, P., Stanish, L.F., Walser, O.¹, Gallery, R.E. (2015) Variation of soil microbial communities within the National Ecological Observatory Network. *PLoS One*. 10 (11): e0135352. DOI: 10.1371/journal.pone.0135352
- Morlon, H., O'Connor, T.K., Bryant, J.A.², Charkoudian, L., **Docherty, K.M.**, Jones, E., Kembel, S.W., Green J.L., Bohannon, B.J.M. (2015) The biogeography of putative microbial antibiotic production. *PLoS One*. 10 (6): e0130659. DOI: 10.1371/journal.pone.0130659
- Docherty, K.M.**, Aiello, S.W.¹, Buehler, B.K.¹, Jones, S.E., Szymczyna, B.R., Walker, K.A.¹ (2015) Ionic Liquid Biodegradability Depends on Specific Wastewater Microbial Consortia. *Chemosphere*. 136: 160-166. DOI: 10.1016/j.chemosphere.2015.05.016
- Adams, C.P.², Walker, K.A.¹, Obare, S.O., **Docherty, K.M.** (2014) Inhibitory Properties of Three Novel Palladium-based Nanomaterials to Microbial Growth. *PLoS One*. 9 (1): e85981. DOI: 10.1371/journal.pone.0085981
- Kao, R.H., Gibson, C.M., Gallery, R.E., Meier, C.L., Barnett, D.T., **Docherty, K.M.**, Blevins, K.K., Travers, P.D., Azuaje, E., Springer, Y.P., Thibault, K.M., McKenzie, V.J., Keller, M., Alves, L.F., Hinckley, E-L. S., Parnell, J., Schimel, D. (2012) NEON Terrestrial Field Observations: Designing Continental-Scale, Standardized Sampling. *Ecosphere*. 3(12): Article 115. DOI: 10.1890/ES12-00196.1
- Docherty, K.M.** and Gutknecht, J.L.M. (2012) The Role of Environmental Microorganisms in Ecosystem Responses to Global Change: Current State of Research and Future Outlooks. *Biogeochemistry*. 109(1-3):1-6. DOI: 10.1007/s10533-011-9614-y
- Docherty, K.M.**, Balser, T.C., Bohannon, B.J.M., Gutknecht, J.L.M. (2012) Soil Microbial Responses to Fire and Interacting Global Change Factors in a California Annual Grassland. *Biogeochemistry*. 109(1-3):63-83. DOI: 10.1007/s10533-011-9654-3
- Kulacki, K.J., Chaloner, D.M., Costello, D.M., **Docherty, K.M.**, Larson, J.H., Bernot, R.J., Evans-White, M.A., Brueske, M.A., Lamberti, G.A., Kulpa, C.F. (2011) Proactive Aquatic Ecotoxicological Assessment of Room-Temperature Ionic Liquids. *Current Organic Chemistry*. 15: 1918-1927. DOI: 10.2174/138527211795703685

- Docherty, K.M.**, Joyce, M.A., Kulacki, K.J., Kulpa, C.F. (2010) Microbial Biodegradation and Metabolite Toxicity of Three Pyridinium Cation-Based Ionic Liquids. *Green Chemistry*. 12(4): 701-712. DOI: 10.1039/B919154B
- Kulacki, K.J., Chaloner, D.T., Costello, D.M., **Docherty, K.M.**, Larson, J.H., Bernot, R.J., Brueseke, M.A., Kulpa Jr., C.F., and G.A. Lamberti. (2007) Aquatic Toxicity and Biodegradation of Ionic Liquids: A Synthesis. *Chemistry Today* 25 (6 supp): p32-36.
- Docherty, K.M.**, Dixon, J.K., Kulpa, C.F. (2007) Biodegradability of Imidazolium and Pyridinium Ionic Liquids by an Activated Sludge Microbial Community. *Biodegradation*. 18 :481-493. DOI: 10.1007/s10532-006-9081-7
- Docherty, K.M.**, Hebbeler, S.Z., Kulpa, C.F. (2006) An Assessment of Ionic Liquid Mutagenicity Using the Ames Test. *Green Chemistry*. 8: 560-567. DOI: 10.1039/B602418A
- Couling, D.J., Bernot, R.J., **Docherty, K.M.**, Dixon, J.K., Maginn, E.J. (2006) Ionic Liquid Toxicity to Aquatic Organisms: Experimental Studies and Quantitative Structure-Property Relationship Modeling. *Green Chemistry*. 8: 82-90. DOI: 10.1039/B511333D
- Docherty, K.M.**, Young, K.C., Maurice, P.A., Bridgham, S.D., Kulpa, C.F. (2006) Effects of Dissolved Organic Matter Concentration and Quality Upon Three Aquatic Microbial Communities. *Microbial Ecology*. 52: 378-388. DOI: 10.1007/s00248-006-9089-x
- Docherty, K.M.**, Kulpa, C.F. (2005) Toxicity and Antimicrobial Effects of Imidazolium and Pyridinium Ionic Liquids. *Green Chemistry*. 7: 185-189. DOI: 10.1039/B419172B
- Young, K.C., **Docherty, K.M.**, Maurice, P.A., Bridgham, S.D. (2005) Degradation of surface-water dissolved organic matter: influences of DOM chemical characteristics and microbial populations. *Hydrobiologia*. 539: 1-11. DOI: 10.1007/s10750-004-3079-0
- Young, K.C., Maurice, P.A., **Docherty, K.M.**, Bridgham, S.D. (2004) Bacterial Adsorption and Degradation of Dissolved Organic Matter from Two Northern Michigan Streams. *Geomicrobiology Journal*. 21(8): 521-528. DOI: 10.1080/01490450490888208

Manuscripts in Preparation for Submission

- Sprague, E.I.², Dupuis, D.², Koretsky, C.M., **Docherty, K.M.** Road salt deicers alter urban lake microbial dynamics and increase methane release. Target: *Freshwater Biology*
- Spring, A.M.², Domingue, K.D.², Mooney, M.M.¹, Kerber, T.V.¹, Lemmer, K.M., **Docherty, K.M.** Airborne bacterial communities at various altitudes are defined by underlying land use. Target: *Environmental Microbiology*

GRANTS AND FELLOWSHIPS

Pending

USDA AFRI Agricultural Microbiome in Plant Systems and Natural Resources Role: Lead PI. “Enhancing Soil Microbial Communities to Promote Sustainable Prairie Restorations.” (\$749,051, 3/2020-2/2024)

Michigan Space Grant Consortium Research Seed Grant. Role: Sole PI. “Designer Microbial Consortia for Growing Corn in Mars Simulant Soil.” (\$10,000, 5/2020-5/2021).

Past Funding

National Science Foundation, Macrosystems Division. Role: Lead PI. “Exploring Ecosystem Contributions of Microbial Diversity to the Vertical Atmosphere.” (\$299,995, 1/2016 - 12/2019).

The Edward Lowe Foundation. Role: Sole PI. “Enhancing Soil Microbial Services in an Agricultural Ecosystem.” (\$6,000, 5/2015 - 5/2020).

Michigan Department of Environmental Quality, Role: Co-PI with Dr. Carla Koretsky (WMU) “The Influence of Road Deicers on the Chemistry of Michigan Lakes.” (\$37,262, 9/2016 - 9/2018).

National Science Foundation, Role: Lead PI. REU Supplement to “Exploring Ecosystem Contributions of Microbial Diversity to the Vertical Atmosphere.” (\$15,000, 2015-2017).

Michigan Space Grant Consortium Research Seed Grant. Role: Sole PI. “Examining Vertical Changes in the Air Microbiome Associated with Land Use and Seasonality.” (\$10,000, 10/2015 - 4/2016).

National Science Foundation, REU Supplement to “An Integrated Molecular Simulation, Biophysical Experimentation and Toxicology Bioassay Approach for Mechanistic Understanding of Toxic Effects of Ionic Liquids.” (\$3000; co-PI, 2012)

U.S. Department of Energy. “Travel for Ecological Society of America August 2010 Meeting Symposium: “Microbial Gate-Keepers and Climate Change”. United States Department of Energy Grant. (\$15,000; lead PI, 2009)

National Science Foundation Postdoctoral Research Fellowship in Biology. “Examining Microbial Biodiversity and Spatial-Temporal Distribution Using Phylogenetic Clustering and Overdispersion Analyses.” Dr. B.J.M. Bohannan and Dr. J.L. Green, faculty sponsors (\$114,000, 2007-2009)

National Science Foundation Graduate Research Fellowship in Biology. “Microbial Metabolism of Dissolved Organic Carbon and Relative Microbial Community Structure.” Dr. S.D. Bridgham and Dr. C.F. Kulpa, faculty advisers. (\$93,000, 2002-2007)

Hudson River Foundation Tibor T. Polgar Fellowship. “Coliphage in the Hudson River as Agents of Coliform Mortality and Indicators of Water Quality.” Dr. R. Kepner, faculty adviser. (\$4800, 2000)

Internal Awards While At WMU

- WMU Faculty Research and Creative Activities Award (FRACAA), 2012 and 2017 (\$10,000)
- WMU College of Arts and Sciences Interdisciplinary Research Award, 2013 & 2015 (\$5000)
- WMU College of Arts and Sciences Discovery & Dissemination Award, 2013 (\$1000)
- WMU Support for Faculty Scholars Award, 2013 & 2015 (\$2000)
- WMU Research Development Award, 2012 (\$500)

PROFESSIONAL ACTIVITIES

Past and Present Professional Society Affiliations: Ecological Society of America (ESA), International Society for Microbial Ecology (ISME), American Geophysical Union (AGU), Society for Ecological Restoration (SER), Soil Ecology Society (SES), American Society for Microbiology (ASM)

Recent Invited Conference and Public Talks (Docherty as lead presenter)

*This list is abridged. A full list of conference presentations including posters, oral session talks and presentations by my students can be found on my website.

Prebiotic and probiotic approaches to shifting soil microbial communities in new prairie restorations. Midwest Great-Lakes Region Society for Ecological Restoration meeting, Lyndhurst, OH (March 2020)

Incorporating Soil Microbes into Practical Restoration. 2019 Oak Openings Science Summit, Toledo, OH (November 2019)

Let's go fly a kite! Near surface airborne bacteria reach higher altitudes and are homogenized by urbanization. Ecological Society of America Annual Meeting, Louisville, KY (August 2019)

Urban Homogenization of Soil Bacterial Communities Across Four North American Ecoregions. Soil Ecology Society Meeting, Toledo, OH (May 2019)

Microbial Responses to Anthropogenic Changes: Implications of Altered Biodiversity and Function. Plenary Talk at Kellogg Biological Station K-12 Teachers Fall Partnership Workshop Kellogg Biological Station, Gull Lake, MI. (November 2018)

Exploring Air Quality. Public Talk for Science on the Preserves Series through Southwest Michigan Land Conservancy. Kalamazoo, MI. (July 2018)

Up, up and away: Using the NEON framework for investigating distribution of airborne microbial communities. In IGNITE Session: “NEON’s First Light” 101st ESA Annual Meeting, Ft. Lauderdale, FL (August 2016)

Restoring for resilience: Strategies for reducing the effects of warming on restored soil microbial communities. In Symposium 6 - Soil: A Manageable Filter, Critical Threshold, or Irreversible Tipping Point in Ecological Restoration? Ecological Society of America Annual Meeting, Ft. Lauderdale, FL. (August 2016)

Toward belowground restoration: understanding the effects of land management on soil microbial communities in a tallgrass prairie. Mid-west Great Lakes Chapter Society for Ecological Restoration Annual Meeting, Bloomington, IN (April 2016)

Toward belowground restoration: understanding the effects of land management on soil microbial communities in a tallgrass prairie. Public Talk at the Asylum Lake Preservation Council Meeting (April 5, 2016)

Terrestrial Influences on Airborne Microbial Communities. 7th Annual Argonne Soil Metagenomics Workshop, Lisle, IL. (October 2015)

Restoring for resilience: Strategies for reducing the effects of warming on restored soil microbial communities. Ecological Society of America Annual Meeting, Baltimore, MD. (Aug 2015)

Workshop Presentation: National Ecological Observatory Network: Resources for Long-term, Continental-scale Microbial Ecology and Preliminary Results from Four Sites. Explorations in Data Analyses for Metagenomic Advances in Microbial Ecology (EDAMAME) Workshop, Kellogg Biological Station (August 2014)

Year-long effects of fire on soil microbial activity in southwest Michigan prairies. Michigan Prescribed Fire Council Meeting, Kalamazoo Nature Center (September 11, 2014)

Webinar for the Lake States Fire Consortium: When is a Grassland Restoration Truly Restored? Webinar for Lake States Fire Consortium. (January 30, 2014, with Ashley Wick and Ryan Koziatek from Kalamazoo Nature Center)

Recent Professional Development Activities

- Implicit Bias Training participant - WMU Office of Institutional Equity (Oct 2018)
- How to Respond to a Disclosure of Sexual or Gender-Based Harassment or Violence participant - WMU Office of Institutional Equity/Title IX (Nov 2018)
- Teaching Inclusivity Workshop participant - WMU Office of Faculty Development (Nov 2018)
- Leopold Leadership Teach-In participant - at University of Minnesota, Twin Cities (June 2018)

TEACHING

Western Michigan University

Undergraduate Courses

- Ecology: (5 credits) required for upper-level undergraduate biology majors, 40-60 students per class. Topics covered in lecture and labs include global scale ecology (biogeography, global change), ecosystem ecology (energy and nutrient cycling), community ecology (succession, community assembly theories, calculating metrics of diversity) and population ecology (predator-prey and competition models), all with a focus on the underlying role of evolution in driving selection for adaptation, genotypes and phenotypes. Instructor in Fall 2019.
- Microbiology: (5 credits) required for upper-level undergraduate biomedical sciences majors, 65-80 students per class. Topics covered in lecture and labs include microbial growth and metabolism, pathogenesis, antibiotic use and resistance, molecular microbial methods and microbial biodiversity. Involves mentoring and teaching observations for 2-3 graduate teaching assistants. Instructor in Spring 2012-2016, 2019 and Fall 2011, 2016 and 2018.

Graduate Courses

- Microbial Ecology: (3 credits) is a graduate/undergraduate elective course with 20 students per class. The course is designed to teach students how to interpret next generation sequencing data, and then focuses on primary literature about specific topics that are relevant to the current state of research in the field of microbial ecology. Instructor in Spring 2020.
- Ecology of the Human Microbiome: (3 credits) is a graduate/undergraduate elective course with 20 students per class. Topics covered include high throughput sequence analysis and multivariate statistics and exploration of recent primary literature investigating the role of microbial communities associated with the human body. Instructor in Fall 2013, 2014 and 2016.

- Professional Development: (3 credits) is a graduate/undergraduate course co-offered to 25 students per class, majoring in Biological Sciences and Chemistry. This interactive course prepares students for post-graduate careers by creating documents that can be edited in the future, a career panel, and teaching students to find funding. Instructor in Fall 2015.
- NEON Microbial Ecology and Ecoinformatics Analysis: (1 credit) is a long-distance graduate course co-taught with Dr. Rachel Gallery at University of Arizona. We worked with students from both universities to analyze NEON soil microbial prototype data and prepare a manuscript for publication. Instructor in Spring 2014.
- Biological Sciences Colloquium: (1 credit) is a required graduate course, and involves inviting and organizing visits from scientists external to WMU to give a weekly seminar for the department. Students also prepare conference-style presentations and provide each other with feedback. Instructor in Spring 2013 and Spring 2020.

University of Notre Dame

- Introductory Biology II Laboratory: (1 credit) a required class for freshman science majors, 40 students per class. Topics covered included anatomy and fetal pig dissection, experimental design, CO₂ effects on plant photosynthesis. Teaching Assistant in Spring 2002.
- General Ecology Laboratory: (1 credit) an elective course for biology majors, 15 students per class. Topics covered included succession, predation, competition, soil biogeochemistry, field sampling technique and laboratory report preparation. Teaching Assistant in Fall 2001.

MENTORING

Graduate Mentees (4 students)

Graduate Mentor –Douglas Pearce (M.S., defended Oct 2016), Emily Sprague (M.S., defended March 2018), Allison Spring (M.S., defended March 2019), Zachary Whitacre (M.S.)

Graduate Co-Mentor - Diana Carter (M.S., defended July 2017)

Graduate Committee Member – Western Michigan University: Samantha Hack (BIOS, PhD), Victor deBrito (BIOS, PhD.), Carol Beaver (BIOS, PhD), Kenneth Domingue (MAE, M.S.E.), Danielle Dupuis (GEOS, M.S.), Kelly Houseal (BIOS, M.S.), Allister Malcolm (BIOS, M.S.), Anja Williams (BIOS, M.S.); Michigan State University: Jaron Adkins (PhD); University of Oregon: Will Truce (M.S.)

Undergraduate Mentees Since Beginning at WMU (27 students)

Lee Honors College Undergraduate Thesis Mentor (9 students) – Barbara Buehler (NSF-REU), Steven Aiello, Kristen Bergh (NSF-REU), Jordan Teachout, Allison Spring, Jacob Evans, Cody Benfant, Haley Ritsema, Megan Nippa

Undergraduate Research Mentor (non-thesis, 18 students)– Caroline Wolf, Mitchell Patalon, Victoria Kras, Marco Luna, Andrew Cater, Dan Dunaske, Noelle Gutowski, Mary-Claire Cotner, Katherine Walker, Jeremiah Chang, Eric Conti, Robin Luo, Brian Lindberg, Natalia Radzikowski, Lisa Meints, Katie Mulka, Tom Burghard, Sean Flanagan

Undergraduate Mentees Prior to WMU (5 students)

University of Oregon: Jessica Hoyle (NSF-REU), Jose Rojas (NSF-REU)
University of Notre Dame: Ralph Pantony, Meghan Perks, Peter Chelbeck

UNIVERSITY SERVICE

WMU Biological Sciences Department

- Graduate Admissions Adviser (Fall 2018-present) – this is a heavy service requirement that involves: answering questions from prospective students year round, presenting sessions on the accelerated graduate programs to undergraduate students, organizing new graduate student orientation each fall, organizing a recruitment/interview day each January, reviewing all applications for our graduate programs, contacting students about admittance/denial decisions, receiving and reviewing applications for teaching assistantships.
- Search committee chairperson for public health cluster hire (Fall 2018-Spring 2019)
- Graduate Policies and Admissions Committee (Fall 2016-present)

- Search committee member for Anatomy/Physiology position (Spring 2016)
- Career panel for Biological Sciences (Spring 2016, in Professional Development course)
- Founder and organizer of the Students Advancing Biological Research and Engagement (SABRE) crowdsource funding program. This program provided partial summer support undergraduate students working with faculty advisers (2013-present)

Talks Given to WMU Campus Groups and Other University Service

- Medallion Scholarship judge for Lee Honors College (2015, 2016, 2018, 2020)
- First Year Experience Guest Speaker (annually)
- Panelist for the Academic Kickoff Event during Fall Welcome (Sept 2015)
- OVPR Discover Discovery Panelist: “You Know They Are Talking About you - But What Are They Saying?” (January 25, 2016)
- Discover Discovery Panelist: Early-Career Faculty Education and Training (Sept 22, 2015)
- Poster judge for WMU Research Day at Bernhard Center (April 2014)
- Lyceum Lecture Series: “Climate Change: Scientific, Socioeconomic and Policy Perspective, “Climate Change and Emerging Infectious Diseases” (February 13, 2013)
- OVPR Research and Dessert Day Presentation: “Interdisciplinary Approaches to Climate Change Research and Training” with Drs. David Karowe and Carla Koretsky (Nov 2012)
- REU/HHMI Program Seminar (July 2012)

SERVICE TO THE SCIENTIFIC COMMUNITY

Service as a Reviewer

- National Science Foundation Panel Reviewer:
 - a. NSF Division of Environmental Biology, Ecosystems Cluster review panels. (2015 and 2017)
 - b. NSF Antarctic Organisms and Ecosystems proposal review panel. (2012)
 - c. NSF Ad Hoc Reviewer – 9 full proposals.
- Peer Reviewer for Scientific Journals – Scientific Reports, Soil Biology and Biochemistry, Environmental Science and Technology, The ISME Journal, Molecular Ecology, PLoS One, Environmental Microbiology, Microbial Ecology, Microbiome, International Biodeterioration and Biodegradation, Global Ecology and Biogeography, European Journal of Soil Biology and Water Research

Service to Professional Societies

- Chair/Vice-Chair of Ecological Society of America Microbial Ecology Section (2011-2013)
- Guest Editor for *Biogeochemistry* Special Issue: “The gate-keepers in a changing world: integrating microbial diversity and dynamics with global change biology” (2012, Vol 109) with Dr. Jessica Gutknecht.