

BRADLEY SCOTT STEVENSON

Northwestern University; Earth and Planetary Science
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EDUCATION

Michigan State University, East Lansing, MI
Ph.D., Microbiology, 2000

Miami University, Oxford, OH
B.A., Microbiology, 1992

EXPERIENCE

- 2022-Present Research Associate Professor, Earth and Planetary Sciences, Northwestern University, Evanston, IL
- 2021-2022 Visiting Scholar, Earth and Planetary Sciences, Northwestern University, Evanston, IL
- 2021-2022 Senior Research Associate, Department of Microbiology and Plant Biology, University of Oklahoma, Norman, OK
- 2013-2021 Associate Professor, Department of Microbiology and Plant Biology, University of Oklahoma, Norman, OK
- 2005-2013 Assistant Professor, Department of Botany and Microbiology, University of Oklahoma, Norman OK
- 2002-2016 Instructor, International Geobiology Course, Wrigley Institute for Environmental Studies, University of Southern California
- 2002-2005 Agouron Geobiology Postdoctoral Fellow, Michigan State University, East Lansing, MI
- 2000-2002 Postdoctoral Fellow, Michigan State University, East Lansing, MI
- 1993-2000 Research Assistant, Center for Microbial Ecology, Michigan State University, East Lansing, MI

RESEARCH ACTIVITIES

Dr. Bradley Stevenson's research combines multi-omic technologies with field and laboratory-based experiments to study the role of microorganisms and their interactions in natural and managed ecosystems. The Stevenson research group uses this approach in current projects that include 1) exploring the ecology of antimicrobial-producing microorganisms for drug discovery, 2) studying the role of microbial metabolism in the lithification of modern stromatolites, and 3) developing better strategies for monitoring and mitigating microbial degradation and corrosion in fuel storage tanks. This research program is enriched by multi-disciplinary collaborations with scholars from the fields of Biochemistry, Public Health, Ecology and Evolutionary Biology, Geology, and Material Sciences.

PUBLICATIONS

- Junkins, E.N., McWhirter, J.B., McCall, L.I., and **Stevenson, B.S.** (2022) Environmental structure impacts microbial composition and secondary metabolism. *ISME COMMUN.* **2**, 15 (2022). <https://doi.org/10.1038/s43705-022-00097-5>
- Stevenson, B.S. and Stamps, B.W. (2021) It's Complicated: Rapid Publication of Genomes in *Microbiology Resource Announcements* Can Be Both Part of the Problem and the Solution to Fungal Taxonomic Resolution. *Microbiol. Resour. Announc.* 10(48). <https://doi.org/10.1128/MRA.00458-21>
- Katrin Gaardbo Kuhn, Jane Jarshaw, Erin Jeffries, Kunle Adesigbin, Phil Maytubby, Nicole Dundas, A. Caitlin Miller, Emily Rhodes, **Bradley Stevenson**, Jason Vogel, Halley Reeves (2021) Predicting COVID-19 cases in diverse population groups using SARS-CoV-2 wastewater monitoring across Oklahoma City. *Sci. Tot. Environ.* 812. <https://doi.org/10.1016/j.scitotenv.2021.151431>.
- Floyd, J. G., Stamps, B. W., Goodson, W. J., and **B. S. Stevenson.** (2021) Locating and Quantifying Carbon Steel Corrosion Rates Linked to Fungal B20 Biodiesel Degradation. *Appl. Environ. Microbiol.*, doi: 10.1128/AEM.01177-21
- Junkins, E. N. and **B.S. Stevenson.** (2021) Using Plate-Wash PCR and High-Throughput Sequencing to Measure Cultivated Diversity for Natural Product Discovery Efforts. *Front. Microbiol.* doi: 10.3389/fmicb.2021.675798
- Petryshyn, V. A., Junkins, E., Stamps, B. W., Bailey, J. W., **Stevenson, B. S.**, Spear, J. R., Corsetti, F. A. (2021). "Builders, tenants, and squatters: The origins of genetic material in modern stromatolites." *Geobiol*, doi: 10.1111/gbi.12429.
- Stamps, B. W., Bojonowski, C. L., Drake, C. A., Nunn, H. S., Lloyd, P. F., Floyd, J. G., Berberich, K. A., Neal, A. R., Crookes-Goodson, W. J., **Stevenson, B. S.** (2020). In situ Linkage of Fungal and Bacterial Proliferation to Microbiologically Influenced Corrosion in B20 Biodiesel Storage Tanks. *Front. Microbiol.*, doi: 10.3389/fmicb.2020.00167
- Cooper, C.W., Aithinne, K.A.N., Floyd, E. L., **Stevenson, B.S.**, D.L. Johnson. (2019) A Comparison of Air Sampling Methods for *Clostridium difficile* Endospore Aerosol. *Aerobiologia* 35(3). doi: 10.1007/s10453-019-09566-2
- Varaljay, V.A., Lyon, W.J., Crouch, A.L., Drake, C.A., Hollomon, J.M., Nadeau, L.J., Nunn, H.S., **Stevenson, B.S.**, Bojanowski, C.L., W.J. Crookes-Goodson. (2019) Draft Genome Sequence of Filamentous Fungus *Phialemoniopsis curvata*, Isolated from Diesel Fuel. *Microbiol. Resour. Announc.* 8(30). doi: 10.1128/MRA.00400-19
- Junkins, E.N., Stamps, B.W., Corsetti, F.A., Oremland, R.S., Spear, J.R., and **B.S. Stevenson.** (2019) Draft Genome Sequence of *Picocystis* sp. Strain ML, Cultivated from Mono Lake, California. *Microbiol. Resour. Announc.* 8(4). e01353–18. doi:10.1128/MRA.01353-18.
- Wilmeth, D.T., Johnson, H.A., Stamps, B.W., Berelson, W.M., **Stevenson, B.S.**, Nunn, H.S., Grim, Sh.L., Dillon, M.L., Paradis, O., and F.A. Corsetti. (2018) Environmental and Biological Influences on Carbonate Precipitation Within Hot Spring Microbial Mats in Little Hot Creek, CA. *Front. Microbiol.* 2018; 9: 1464. doi: 10.3389/fmicb.2018.01464
- Stamps, B.W., Nunn, H.S., Petryshyn, V.A., Oremland, R.S., Miller, L.G., Rosen, M., Bauer, K.W., Thompson, K.J., Tookmanian, E.M., Waldeck, A.R., Lloyd, S.J., Johnson, H.A., **Stevenson, B.S.**, Berelson, W., Corsetti, F.A., and J.R. Spear. (2018) Metabolic Capability and Phylogenetic Diversity of Mono Lake during a Bloom of the Eukaryotic Phototroph

- Picocystis* sp. Strain ML. *Appl. Environ. Microbiol.* 84(21). pii: e01171-18. doi: 10.1128/AEM.01171-18.
- Kraus, E.A., Beeler, S.R., Mors, R.A., Floyd, J.G., GeoBiology 2016, Stamps, B.W., Nunn, H.S., **Stevenson, B.S.**, Johnson, H.A., Shapiro, R.S., Loyd, S.J., Spear, J.R., and F.A. Corsetti. (2018) Microscale Biosignatures and Abiotic Mineral Authigenesis in Little Hot Creek, California. *Front. Microbiol.* 9: 997. doi: 10.3389/fmicb.2018.00997
- Stamps, B.W., Andrade, O.C., Lyon, W.J., Floyd, J.G., Nunn, H.S., Bojanowski, C.L., Crookes-Goodson, W.J., and **B.S. Stevenson**. (2018) Genome Sequence of a *Byssochlamys* sp. Strain Isolated from Fouled B20 Biodiesel. *Genome Announcements* 6, no. 9:e00085–18. doi:10.1128/genomeA.00085-18.
- Stamps, B.W., Zingarelli, S., Hung, C-S, Drake, C.A., Varaljay, V.A., **Stevenson, B.S.**, and W.J. Crookes-Goodson. (2018) Finished Genome Sequence of a Polyurethane-Degrading *Pseudomonas* Isolate. *Genome Announcements* 6, no. 9: e00084–18. doi:10.1128/genomeA.00084-18.
- Du, L., Risinger, A.L., Mitchell, C.A., You, J., Stamps, B.W., Pan, N., King, J.B., Bopassa, J.C., Judge, S.I.V., Yang, Z., **Stevenson, B.S.**, and R.H. Cichewicz (2017) Unique Amalgamation of Primary and Secondary Structural Elements Transform Peptaibols Into Potent Bioactive Cell-Penetrating Peptides. *Proc. Nat. Acad. of Sci.* 114, no. 43: E8957–66. doi:10.1073/pnas.1707565114.
- Lucas, J., Bill, B., **Stevenson, B.**, and M. Kaspari. (2017) The Microbiome of the Ant-Built Home: the Microbial Communities of a Tropical Arboreal Ant and Its Nest. *Ecosphere* 8, no. 2: e01639. doi:10.1002/ecs2.1639.
- Bradley, J.A., Daille, L.K., Trivedi, C.B., Bojanowski, C.L., Stamps, B.W., **Stevenson, B.S.**, Nunn, H.S., Johnson, H.A., Loyd, S.J., Berelson, W.M., Corsetti, F.A., and J.R. Spear. (2017) Carbonate-Rich Dendrolitic Cones: Insights into a Modern Analog for Incipient Microbialite Formation, Little Hot Creek, Long Valley Caldera, California. *NPJ Biofilms and Microbiomes* 3, no. 1 (2017): 32. doi:10.1038/s41522-017-0041-2.
- Marks, C.R., Cooper, J.T., Bonifay, V., Stamps, B.W., Le, H.M., Harriman, B.H., De Capite, A., Brown, K.R., Aktas, D.F., Sunner, J., **Stevenson, B.S.**, Duncan, K.E., McInerney, M.J., Gunaltun, Y., Souquet, P., and J.M. Suflita (2017) Integrated Methodology to Characterize Microbial Populations and Functions across Small Spatial Scales in an Oil Production Facility, In *Microbiologically Influenced Corrosion in the Upstream Oil and Gas Industry*. Scovis, T.L., Enning, D., and J.S. Lee (eds). CRC Press, pp. 325-350. doi.org/10.1201/9781315157818-17
- Duncan K.E., Davidova I.A., Nunn H.S., Stamps B.W., **Stevenson B.S.**, Souquet P.J., and J.M. Suflita (2017) Design Features of Offshore Oil Production Platforms Influence their Susceptibility to Biocorrosion. *Appl. Microbiol. Biotechnol.* 52:1621–13.
- Beaton E.D., **Stevenson B.S.**, King-Sharp K.J., Stamps B.W., Nunn H.S., and M. Stuart (2016) Local and Regional Diversity Reveals Dispersal Limitation and Drift as Drivers for Groundwater Bacterial Communities from a Fractured Granite Formation. *Front. Microbiol.* 7:19–16.
- Motley J.L., Stamps B.W., Mitchell C.A., Thompson A.T., Cross J., You J., Powell D.R., **Stevenson B.S.**, and R.H. Cichewicz (2016) Opportunistic Sampling of Roadkill as an Entry Point to Accessing Natural Products Assembled by Bacteria Associated with Non-anthropoidal Mammalian Microbiomes. *J. Nat. Prod.* acs.jnatprod.6b00772.

- Liang R., Davidova I.A., Marks C.R., Stamps B.W., Harriman B.H., **Stevenson B.S.**, Duncan K.E., and J.M. Suflita (2016) Metabolic Capability of a Predominant *Halanaerobium* sp. in Hydraulically Fractured Gas Wells and Its Implication in Pipeline Corrosion. *Front. Microbiol.* 7:116.
- Stamps, B.W., Lyles, C.N., Suflita, J.M., Masoner, J.R., Cozzarelli, I.M., Kolpin, D.W. and **B.S. Stevenson** (2016) Municipal solid waste landfills harbor distinct microbiomes. *Front. Microbiol.*, 7:534. DOI: 10.3389/fmicb.2016.00534
- Stamps, B.W., Du, L., Mitchell, C.A., Cichewicz, R.H., and **B.S. Stevenson** (2015) Draft genomes of two Sordariomycete fungi that produce novel secondary metabolites. *Genome Announcements*, 3: e00291-15. DOI:10.1128/genomeA.00291-15
- Stamps, B.W., Corsetti, F.A., Spear, J.R., and **B.S. Stevenson** (2014) Draft genome of a novel Chlorobi member assembled by tetranucleotide binning of a hot spring metagenome. *Genome Announcements*, 2: e00897-14. DOI: 10.1128/genomeA.00897-14
- Stamps, B.W., Losey, N.A., Lawson, P.A. and **B.S. Stevenson** (2014) Genome sequence of *Thermoanaerobaculum aquaticum* MP-01T, the first cultivated member of Acidobacteria subdivision 23, isolated from a hot spring. *Genome Announcements*, 2:e0057-14. DOI:10.1128/genomeA.00570-14
- Theodore, C.M., Stamps, B.W., King, J.B., Price, L.S.L., Powell, D.R., **Stevenson, B.S.** and R.H. Cichewicz (2014) Genomic and metabolomic insights into the natural product biosynthetic diversity of a feral-hog-associated *Brevibacillus laterosporus* strain. *PlosOne*. 9(3):e90124. DOI 10.1371/journal.pone.0090124.s021
- Liu, K., Atiyeh, H.K., **Stevenson, B.S.**, Tanner, R.S., Wilkins, M.R. and R.L. Huhnke (2014) Mixed culture syngas fermentation and conversion of carboxylic acids into alcohols. *Bioresour. Technol.* 152: 337-346. DOI 10.1016/j.biortech.2013.11.015
- Liu, K., Atiyeh, H.K., **Stevenson, B.S.**, Tanner, R.S., Wilkins, M.R. and R.L. Huhnke (2014) Continuous syngas fermentation for the production of ethanol, n-propanol and n-butanol. *Bioresour. Technol.* 151: 69-77. DOI 10.1016/j.biortech.2013.10.059.
- Losey, N.A., **Stevenson, B.S.**, Busse, H.-J., Damste, J.S.S., Rijpstra, W.I.C., Rudd, S., and P.A. Lawson (2013) *Thermoanaerobaculum aquaticum* gen. nov., sp. nov., the first cultivated member of *Acidobacteria* subdivision 23, isolated from a hot spring. *Int. J. Syst. Environ. Microbiol.* 63(11): 4149-4157. DOI 10.1099/ijs.0.051425-0.
- Lyles, C.N., Aktas, D.F., Duncan, K.E., Callaghan, A.V., **Stevenson, B.S.**, and J.M. Suflita (2013) Impact of organosulfur content on diesel fuel stability and implications for carbon steel corrosion. *Environ. Sci. Technol.* 47(11): 6052–6062. DOI: 10.1021/es4006702.
- Kerekes, J., Kaspari, M., **Stevenson, B.**, Nilsson, H., Hartmann, M., Amend, A., and T. Bruns (2013) Nutrient enrichment increased species richness of leaf litter fungal assemblages in a tropical forest. *Molec. Ecol.* 22: 2827-2838. DOI: 10.1111/mec12259.
- Johnson, C.N, Drilling, H.S., Lawson, P.A. and **B.S. Stevenson*** (2012) An assessment of measurements generated by scanning electron microscopy for determining microbial contributions to biocorrosion. *Microsc. Microanal.* 18(S2): 26-27.
- Oldham, A.L., Drilling, H.S., Stamps, B.W., **Stevenson, B.S.** and K.E. Duncan (2012) Automated DNA extraction platforms offer solutions to challenges of assessing microbial biofouling in oil production facilities. *AMB Express* 2(60). (<http://www.amb-express.com/content/2/1/60>).

- Marks, C.R., **Stevenson, B.S.***, Rudd, S. and P.A. Lawson (2012) Nitrospira-dominated biofilm within a thermal artesian spring: a case for nitrification-driven primary production in a geothermal setting. *Geobiology* 10(5): 457-466. DOI: 10.1111/j.1472-4669.2012.00335.x.
- Ukpong, M.N., Atiyeh, H.K, De Lorme, M.J.M., Liu, K., Zhu,X., Tanner, R.S., Wilkins, M.R. and **B.S. Stevenson*** (2012) Physiological response of *Clostridium carboxidivorans* during conversion of synthesis gas to solvents in a gas-fed bioreactor. *Biotechnol. Bioeng.* 109(11): 2720-2728. DOI: 10.1002/bit.24549.
- Losey, N.A., **Stevenson, B.S.**, Verborg, S., Rudd, S., Moore, E.R.B., and P.A. Lawson (2012) *Fontimonas thermophila* gen. nov., sp. nov., a moderately thermophilic bacterium isolated from a freshwater hot spring. Proposal of Solimonadaceae fam. nov. to replace Sinobacteraceae Zhou et al. 2008. *Int. J. Syst. Evol. Microbiol.* 10.1099/ijs.0.037127-0.
- Stevenson, B.S.***, Suflita, M.T., Stamps, B.W., Moore, E.R.B., Johnson, C.N., and P.A. Lawson. (2011) *Hoeflea anabaenae* sp. nov., an epiphytic symbiont that attaches to the heterocysts of a strain of *Anabaena*. *Int. J Syst. Evol. Microbiol.* 61: 2439-2444. DOI 10.1099/ijs.0.025353-0
- Stevenson, B.S.**, Drilling, H.S., Lawson, P.A., Duncan, K.E., Parisi, V.A., and J.M. Suflita (2011) Microbial communities in bulk fluids and biofilms of a North Slope oil facility have similar composition but different structure. *Environ. Microbiol.* 13(4): 1078-1090. DOI: 10.1111/j.1462-2920.2010.02413.x.
- Hemme, C.L., Mouttaki, H., Lee, Y-J., Goodwin, L., Lucas, S., Copeland, A., Lapidus, A., Glavina del Rio, T., Tice, H., Saunders, E., Brettin, T., Detter, J.C., Han, C.S., Pitluck, S., Land, M.L., Hauser, L.J., Krypides, N., Mikhailova, N., He, Z., Wu, L., Van Nostrand, J.D., Henrissat, B., He, Q., Lawson, P.A., Tanner, R.S., Lynd, L.R., Wiegel, J., Fields, M.W., Arkin, A.P., Schadt, C.W., **Stevenson, B.S.**, McInerney, M.J., Yang, Y., Dong, H., Huhnke, R.L., Mielenz, J.R., Ding, S-Y., Himmel, M.E., Taghavi, S., van der Lelie, D., Rubin, E.M., Zhou, J. (2010) Genome announcement: Sequencing of multiple clostridia genomes related to biomass conversion and biofuels production. *J. Bacteriol.* 194: 6494-6496.
- Kaspari, M., **Stevenson, B.S.**, Shik, J., and J. Kerekes. (2010) Scaling community structure: body size and the differentiation of bacteria, fungi, and ant taxocenes along a tropical forest floor. *Ecology.* 91: 2221-2226.
- Kaspari, M. and **B.S. Stevenson.** (2009) Evolutionary ecology, antibiosis, and all that rot. *Proc. Natl. Acad. Sci. USA.* 105: 10927-10928.
- Behrens, S., Lösekann, T., Pett-Ridge, J., Weber, P.K., Ng, W.O., **Stevenson, B.S.**, Hutcheon, I.D., Relman, D.A., and A.M. Spormann. (2008) Linking microbial phylogeny to metabolic activity at the single cell level using enhanced element labeling - catalyzed reporter deposition fluorescence *in situ* hybridization (EL-FISH) and NanoSIMS. *Appl. Environ. Microbiol.* 74: 3143-3150.
- Stevenson, B.S.** and J.B. Waterbury. (2006) Isolation and Identification of an Epibiotic Bacterium Associated with Heterocystous *Anabaena* Cells. *Biol. Bull.* 210: 73-77.
- Stevenson, B.S.**, Eichorst, S.A., Wertz, J.T., Schmidt, T.M., and J.A. Breznak. (2004) New strategies for the cultivation and detection of previously uncultured microbes. *Appl. Environ. Microbiol.* 70: 4748-4755.
- Stevenson, B.S.** and T.M. Schmidt. (2004) Life history implications of ribosomal RNA gene copy number in *Escherichia coli*. *Appl. Environ. Microbiol.* 70: 6670-6677.

Bratina, B.J., **Stevenson, B.S.**, Green, W.J., and T.M. Schmidt. (1998) Manganese reduction by microbes from oxic regions of the Lake Vanda (Antarctica) water column. *Appl. Environ. Microbiol.* 64: 3791-3797.

Hashimoto, J.G., **Stevenson, B S.**, and T.M. Schmidt. (2003) Rates and consequences of recombination between Ribosomal RNA operons. *J. Bacteriol.* 185: 966-972.

Stevenson, B.S. and T.M. Schmidt. (1998) Growth rate-dependent accumulation of RNA from plasmid-borne rRNA operons in *Escherichia coli*. *J. Bacteriol.* 180: 1970-1972.

Stevenson, B.S., A. A. DiSpirito, and T. M. Schmidt. (1994) Reduction of enzyme adsorption to polypropylene surfaces in the presence of a nonionic detergent. *BioTechniques* 17: 1048-1050.

EXTERNAL FUNDING (ACTIVE)

Tulsa Department of Health/Pathways to Health, Co-PI, "Wastewater Testing in Tulsa OK: Wastewater Based Epidemiology to Monitor Pandemics and Pathogens in the City of Tulsa", \$477,030; 11/2021 – 12/2022

U.S. Department of Defense, Air Force, PI, "Development of Molecular-Based Detection and Biofilm Mitigation Practices to Minimize Corrosion of Metal Surfaces in Fuel Systems", \$530,000; 9/2019 – 9/2024

National Aeronautics and Space Administration, Astrobiology: Exobiology Program Element NNH18ZDA001N-EXO, Co-PI, "Investigating a Novel Role for Iron Redox Cycling in the Lithification of Microbial Mats and the Rise and Fall of Stromatolites in Earth History", \$994,274; 2/2019 – 6/2023

EXTERNAL FUNDING (COMPLETED, LAST 5 YEARS)

City of Oklahoma City, Oklahoma, PI, "SARS-CoV-2 Sewage Surveillance in Oklahoma City for 2021", \$1,047,000; 1/2021 – 12/2021

City of Oklahoma City, Oklahoma, PI, "SARS-CoV-2 Sewage Surveillance in Oklahoma City", \$488,561; 10/2020 – 12/2021

City of Tulsa, Oklahoma, Co-PI, "SARS-CoV-2 Sewage Surveillance at Tulsa Wastewater Treatment Plants", \$49,975; 1/2021 – 6/2021

National Science Foundation, Co-PI, "Acquisition of a Regional Resource for Long-term Archiving of Large Scale Research Data Collections," \$967,755; 9/2018 – 8/2021

Universal Energy Systems (DoD-Air Force Research Laboratories subcontract), PI, "Assessment of Microbial Contamination in Fuel Tanks and on Aircraft and the Efficacy of Mitigation Efforts", \$299,986; 7/2018 – 5/2020

Universal Energy Systems (DoD-Air Force Research Laboratories subcontract), PI, "Assessment of Microbial Contamination of DoD and DHS Assets and Infrastructure", \$249,962; 12/2015 – 11/2017

United States Air Force Academy (Technical Corrosion Collaboration), PI, "Laboratory-

Based Characterization of Microbiologically Influenced Corrosion of Carbon Steel Associated with B20 Biodiesel" **\$399,642**; 12/2014 – 11/2017

University of Dayton Research Institute (DoD-Air Force Research Laboratories subcontract), PI, "Assessment of Microbial Contamination of DoD and DHS Assets and Infrastructure", **\$120,000**; 6/2015 – 6/2016

Atomic Energy of Canada Limited, PI, "Molecular Analysis of Groundwater Microbial Assemblages" **\$39,996**; 8/2015 – 2/2016

National Institutes of Health, NIAID, Co-PI, "R-21: (MPI) Antimicrobials from Mammalian Microbiomes" **\$402,440**; 6/2012 – 5/2016

INVITED LECTURES (LAST 5 YEARS)

October 2020. "Sewage Surveillance of COVID-19 Prevalence Across OUR Community", OU Research@Home Webinar Series, University of Oklahoma, Norman, OK.

August 2020. "Quantitative Analysis of MIC in Biodiesel Storage Tanks", NACE Corrosion Technology Series MIC, Virtual.

November 2019. "Microbiologically Influenced Corrosion: Susceptibility of Biodiesel Storage Tanks", NACE Education Corrosion Technical Series, Houston, TX.

May 2019. "Microbiomes of Fuel Infrastructure and Aircraft," DLA Energy Worldwide Energy Conference, National Harbor, MD.

October 2018. "Microbiomes of Biodiesel Storage Tanks and their Roles in Fouling, Degradation, and Corrosion," Bioremediation Workshop, MITRE Corporation, McClean, VA.

October 2018. "Microbiomes of Fuel Infrastructure and Aircraft," 2018 Aviation Fuel Cleanliness Conference, American Airlines, University of Dayton Research Institute, Dayton, OH.

July 2018. "Microbiologically Influenced Corrosion in Ground Fuel Storage Tanks," Corrosion Policy and Oversight Office TCC Annual Review, Corrosion Policy and Oversight Office, Secretary of Defense, Hattiesburg, MS.

April 2018. "Microbiomes of Military Aircraft and their Connection to Polymer Biodeterioration," IATA Fuel Microbiology Symposium, Miami, FL.

January 2018. "Microbiological Contamination and Proliferation is Linked to Fouling, Degradation, and Corrosion in B20 Biodiesel Storage Tanks," France/US Scientist Exchange on Corrosion DEA, Department of Defense, San Antonio, TX.

November 2017. "Microbiological Contamination and Proliferation is Linked to Fouling, Degradation, and Corrosion in B20 Biodiesel Storage Tanks," 1st Workshop of Material Science for Corrosion Protection, University of Santiago, Chile, Santiago, Chile.

November 2017. "Potential Targets for Real Time System Monitoring, from a Microbiology Perspective," AFRL Workshop on Sensing Biofouling and MIC in Fuel Systems, Air Force Research Laboratory, Wright Patterson Air Force Base, Dayton, OH.

September 2017. "Assessment of Biocontamination and Biodeterioration in Biodiesel B20 Storage Tanks," Barksdale Air Force Base Civil Engineering Squadron Final Briefing Meeting, United States Air Force, Barksdale Air Force Base, Bossier City, LA.

August 2017. "Laboratory-Based Characterization of Microbiologically Influenced Corrosion of

Carbon Steel Associated with B20 Biodiesel," DoD/Allied Nations Corrosion Conference, Department of Defense, Birmingham, AL.

June 2017. "Microbiomes of Biodiesel Storage Tanks and Their Role in Fouling, Degradation, and Corrosion," ISMOS-6, International Symposium on Applied Microbiology and Molecular Biology in Oil Systems, San Diego, CA.

April 2017. "Microbiomes of Biodiesel Storage Tanks and Their Role in Fouling, Degradation, and Corrosion," Miami University Alumni Association, Distinguished Alumni Lecture Series, Department of Microbiology, University of Miami, Oxford, OH.

April 2016. "Linking Biology to Corrosion in B20 Biodiesel Storage Tanks," Department of Defense Technical Corrosion Collaboration Annual Meeting, Office of the Secretary of Defense, Penn State University.

April 2016. "Recurring Microbial Contamination Affects Fouling, Degradation, and Corrosion in B20 Biodiesel Systems," Air Force Research Laboratory, Soft Materials Directorate, Wright-Patterson Air Force Base, Dayton, OH.

April 2016. "Recurring Microbial Contamination Affects Fouling, Degradation, and Corrosion in B20 Biodiesel Systems," University of Akron, Akron, OH.

SYNERGISTIC ACTIVITIES

Undergraduate training and research: 23 undergraduate students have conducted research in my lab (since 2005), many from minority or under-represented groups (8 women, 3 Asian, 2 Indian, 1 African, 2 Native American). Seven have received support from NSF and the OU Honors College, all have presented their research at university and regional scientific meetings, and all graduates are in graduate or medical school.

Instructor (2002 - 2016) for the **International Geobiology Course** offered by the University of Southern California at the Wrigley Institute for Environmental Studies. I have taught the theory and practice of molecular microbial ecology to nearly 200 early to mid-level graduate students from around the world. The first of these students are now faculty, participating in the course and sending their own students for training. I was also a co-convenor of a Geobiology symposium at the general meeting of ASM in May 2009.

Referee for the Journal of Applied and Environmental Science, ISME Journal, Environmental Science and Technology, Plant and Soil, Antonie van Leeuwenhoek, Trends in Microbiology, and Experimental Biology and Medicine, Energies, Geological Society of America, Biotechnology Progress, Genome, Frontiers in Microbiology

Review Panel for the AAAS, National Academy of Sciences and Department of Energy, ad hoc reviewer for National Science Foundation, French National Research Agency and the North Carolina Biotechnology Center

THESIS AND DOCTORAL ADVISEES:

Lauren Cameron (M.S., Aug 2009)

Michael Ukpong (Ph.D. Jul 2014)

Heather Drilling (Ph.D. Aug 2015)

Blake Stamps (Ph.D. Jun 2016)

Oderay Andrade (M.S. 2016)

Brian Bill (Ph.D. 2019)

James Floyd (Ph.D. 2022)

Emily Junkins (Ph.D. 2022)

AWARDS:

2011	Presidential International Travel Fellowship
2004	Geobiology Postdoctoral Fellowship, Agouron Insitute
2000	Scholarship, Microbial Diversity course, Marine Biological Laboratories
1999	DuVall Scholar Award, Department of Microbiology, MSU
1994 - 2000	Graduate Assistantship, Center for Microbial Ecology, MSU
1992 - 1993	Graduate Assistantship, Department of Microbiology, Miami University

SERVICE (LAST 5 YEARS):

2019 – Present	Chair, Search Committee, Microbial Physiologist. Department of Microbiology and Plant Biology
2018 – Present	Senator, Faculty Senate, University of Oklahoma.
2018 – Present	Chair, Search Committee, Environmental Microbiologist. Department of Microbiology and Plant Biology
2018 – Present	International Committee, Department of Microbiology and Plant Biology
2018 – Present	Chair, Safety Committee, Department of Microbiology and Plant Biology
2017 – Present	American Airlines Fuels Task Force
2017 – Present	Consolidated Core Laboratory (CCL) Steering Committee, University of Oklahoma
2016 – 2017	Dean's Ad Hoc Committee for Independent Development Plans, Graduate College, University of Oklahoma
2013 – 2018	Graduate Recruitment and Retention Committee, Department of Microbiology and Plant Biology
2016 – 2017	Graduate Liaison, Dept. Microbiology and Plant Biology
2015	Faculty Leadership Academy, University of Oklahoma
2015 – 2017	Postdoctoral Advisory Committee, University of Oklahoma
2015 – 2016	Research Liaison, University of Oklahoma
2014 - 2016	Education Assessment Committee, Dept. of Microbiology and Plant Biology, OU
2011 – 2013	Outreach Committee, Oklahoma EPSCoR
2008 – 2015	Graduate Recruitment and Retention Committee
2007 – 2015	Computer Committee, Chair, Department of Botany and Microbiology

PROFESSIONAL MEMBERSHIPS:

Since 2011	Society for Subsurface Microbiology
Since 2005	American Academy for the Advancement of Science
Since 2001	International Society for Microbial Ecology
Since 1999	Sigma Xi, The Scientific Research Society
Since 1996	American Society for Microbiology