

Curriculum Vitae

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Work

Springer Nature

Senior Editor of Biogeochemistry

Oct 2023 - present

Professional Appointment

University of Tennessee, Department of Microbiology

Researcher

Feb. 2023 – Oct 2023

Maryville College, Division of Natural Sciences

Adjunct Professor

Jan. – May 2023

Assistant Professor of Environmental Biology

Aug. 2020 – Jan. 2023

Education and Professional Experience

Carnegie Institution for Science, Earth and Planets Laboratory (formerly Geophysical Lab)

Postdoctoral Research Fellow

Jan. 2019 – Aug. 2020

University of Tennessee, Knoxville

Ph.D. Microbiology, GPA: 3.95

2014 – 2018

M.Sc. Geoscience, GPA: 3.94

2012 – 2014

Tennessee Technological University

B.S. Biology, *summa cum laude*, minor geology, GPA: 3.92

2011

Agouron Institute

International Geobiology Course graduate

2015

Publications

Sipes, K., **Buongiorno, J.**, Steen A. D., Abramov, A.A., Abuah, C., Peters, S.L.,
Gianonne, R.J., Hettich, R.L., Boike, J., Garcia, S.L., Vishnivetskaya, T.A., Lloyd, K.G.
(2024) Depth-specific distribution of bacterial MAGs in permafrost active layer in Ny
Ålesund, Svalbard (79°N). *Systematic and Applied Microbiology*.

Rogers, T.J., **Buongiorno, J.**, Jessen, G.L., Schrenk, M., Fordyce J.A., de Moor, J.A.,
Ramirez, C., Barry, P.H., Yücel, M., Selcim M., Cordone, A., Giovannelli, D., Lloyd,
K.G. (2022). Patterns in chemolithoautotroph distribution across a subsurface convergent
margin landscape. *ISME Journal*. <https://doi.org/10.1038/s41396-022-01331-7>.

Barry P.H., De Moor J.M., Chiodi A., Aguilera F., Hudak M.R., Bekaert D.V., Turner S.J.,
Curtice J., Seltzer A.M., Jessen G.L., Osses E., Blamey J.M., Amenábar M.J., Selci M.,
Cascone M., Bastianoni A., Nakagawa M., Filipovich R., Bustos E, Schrenk M.O.,

Buongiorno J., Ramírez C.J., Rogers T.J., Lloyd K.G. and Giovannelli D. (2022). The Helium and Carbon Isotope Characteristics of the Andean Convergent Margin. *Front. Earth Sci.* 10:897267. doi: 10.3389/feart.2022.897267

Aptekmann, A. A., **Buongiorno, J.**, Giovannelli, D., Glamoclija, M., Ferreiro, D. U., & Bromberg, Y. (2022). mebipred: identifying metal-binding potential in protein sequence. *Bioinformatics*, 38(14), 3532-3540.

Tully, B.J., **Buongiorno, J.**, Cohen, A.B., Cram, J.A., Garber, A.I., Hu, S.K., Krinos, A.I., Leftwich, P.T., Marshall, A., Sieradzki, E.T., Speth, D.R., Suter, E.A., Trivedi, C.B., Valentin-Alvarado, L.E., Weissman, J.L., Lee, M.D., Alexander, H., Collins, R.E., Pachiadaki, M., Rhodes, A.C.E., Decatur, W. (2021). The Bioinformatics Virtual Coordination Network: an open-source and interactive learning environment. *Frontiers in Bioinformatics*.

Hand, Kevin, et al. On the Past, Present, and Future Role of Biology in NASA's Exploration of our Solar System. (2021). *Bulletin of the American Astronomical Society* 53.4: 229.

Fullerton, K. M., Schrenk, M., Yucel, M., Manini, E., Marco, B., Rogers, T. J., **Buongiorno, J.** ... Lloyd, K. (2021). Effect of tectonic processes on biosphere–geosphere feedbacks across a convergent margin. *Nature Geoscience*, 14.5, 301-306. doi: <https://doi.org/10.1038/s41561-021-00725-0>.

Flieder M, **Buongiorno J.**, Herbold C, Hausmann B, Rattei T, Lloyd K, Loy A, Wasmund K. (2021). Novel taxa of Acidobacteriota implicated in seafloor sulfur cycling. *ISME Journal*, 1-22. doi: <https://doi.org/10.1038/s41396-021-00992-0>.

Buongiorno J., Sipes K., Wasmund K., Loy A., Lloyd K.G. (2020). Woeseiales transcriptional response to shallow burial in Arctic fjord surface sediment. *PLoS ONE* 15(8): e0234839. <https://doi.org/10.1371/journal.pone.0234839>.

Morrison S.M., **Buongiorno J.**, Downs R.T., Eleish A., Fox P., Giovannelli D., Golden J.J., Hummer D.R., Hystad G., Kellogg L.H., Kreylos O., Krivovichev S.V., Liu C., Merdith A., Prabhu A., Ralph J., Runyon S.E., Zahirovic S. and Hazen R.M. (2020).

Exploring carbon mineral systems: recent advances in C mineral evolution, mineral ecology, and network analysis. *Front. Earth Sci.* 8:208. doi: 10.3389/feart.2020.00208
Lloyd, K.G., Bird, J.T., **Buongiorno, J.**, Deas, E., Kevorkian, R., Noordhoek, T., Rosalsky, J., Roy, T. (2020). Evidence for a growth zone for deep subsurface microbial clades in near-surface anoxic sediments. *Applied and Environmental Microbiology*. 86(19): e00877-20.

Buongiorno, J., L.C. Herbert, L.M. Wehrmann, A. Michaud, K. Laufer, H. Røy, B. B. Jørgensen, A. Szykiewicz, A. Faiia, K. M. Yeager, K. Schindler, K. G. Lloyd. (2019).

Complex microbial communities drive iron and sulfur cycling in Arctic fjord sediments. *Applied and Environmental Microbiology*, 00949-19; doi: 10.1128/AEM.00949-19.

Buongiorno, J., Gomez, F. J., Fike, D. A., & Kah, L. C. (2019). Mineralized microbialites as archives of environmental evolution, Laguna Negra, Catamarca Province, Argentina. *Geobiology*, 17(2), 199-222.

Vishnivetskaya T., **Buongiorno J.**, Bird J. T., Krivushin K., Spirina E., Oshurkova V., Shcherbakova S., Wilson G., Lloyd K. G., Rivkina E. (2018). Methanogens in the Antarctic Dry Valley Permafrost. *FEMS Microbiology Ecology*, 94(8).

Buongiorno J., Turner S. Webster G., Asai M., Shumaker A. K., Roy T., ... & Lloyd K. G. (2017). Interlaboratory quantification of Bacteria and Archaea in deeply buried sediments of the Baltic Sea (IODP Expedition 347). *FEMS Microbiology Ecology*, 93(3).

Buongiorno J., Bird J.T., Lloyd K. G., Vishnivetskaya. T. (2016). Draft Genome Sequence of Antarctic Methanogen enriched from Dry Valley Permafrost. *Genome Announcements*, 4(6).

Endorsed Publications

Nayfach, S., Roux, S., Seshadri, R., Udwy, D., Varghese, N., Schulz, F., IMG/M **Data Consortium** & Palaniappan, K. (2020). A genomic catalog of Earth's microbiomes. *Nature Biotechnology*, 1-11.

Co-signatory: Next generation of polar researchers agree on three priorities (2019). *Nature*, 570(36). doi: 10.1038/d41586-019-01718-1. Outcome of the Next Generation of Polar Researchers Leadership Symposium (<https://dornsife.usc.edu/conferences/2019-nsf-ngpr3/>).

Competitive Research Grants and Scholarships

Blank Grant (\$1,500)	2022
Global+ mini-grant (\$1,500)	2022
Kramer Grant, Maryville College (\$1,500)	2021
Community-engaged learning cohort Bonner grant, advanced (\$2,000)	2021
Community-engaged learning cohort Bonner grant, apprentice (\$250)	2021
Hoffner Grant, Maryville College (\$150)	2021
Naylor Grant, Maryville College (\$4,060)	2020
NASA Astrobiology Early Career Collaboration Award, Carnegie Institution for Science (\$5,000)	2019
Student/Faculty Research Award, Univ. of TN (\$2,016)	2016
Explorer's Club Student Research Grant, Univ. of TN (\$1,500)	2016
David C. White Travel Award (\$500)	2016
Graduate Student Senate Travel Award, Univ. of TN (\$700)	2015
Society for Sedimentary Geology Student Assistance Grant (\$1,000)	2015
Geological Society of America Research Grant, Univ. of TN (\$1,250)	2015
Chancellor's Fellowship, Univ. of TN (\$3,000 for 4 years)	2014
Spackman Award, The Society for Organic Petrology, Univ. of TN (\$1,000)	2013

Society for Sedimentary Geology Student Assistance Grant (\$750)	2013
Geological Society of America Research Grant, Univ. of TN (\$1,913)	2013
Bill Ross Field Camp Scholarship, Univ. of TN (\$750)	2013
Graduate Student Senate Travel Award, Univ. of TN (\$2,500)	2013

Honors and Awards

The ISME Journal Outstanding Editorial Board Member Award	2022
Extraordinary Scientist Advocate, Union of Concerned Scientists	2018
Carolyn W. Fite Award for Outstanding Scholarly Achievement	2018
UTK Professional Promise Award	2018
Jimmy and Ileen Cheek Graduate Student Medal of Excellence	2018
Dept of Microbiology Graduate Award for Scientific Achievement	2017
Graduate Student Senate Award for Excellence in Research	2017
Recipient of UT Police Dept. challenge coin	2016
Mamont Scholar, Explorer's Club	2016
Best oral presentation, 3 rd Annual Southeastern Biogeochemistry Symposium	2016
Liberal Arts and Sciences Award, Tennessee Tech	2011
W.H. Farley Award, Tennessee Tech	2010

Awards of Undergraduate Students

Ledford fellowship: Arianna Brown, freshman, \$4600, Project title: "Tracing microbial community structure in marine sediments of Svalbard, high Arctic (79°N) with quantitative PCR") 2021

Maryville College Senior Thesis grants (\$500): Claire Willenbrink ('21), Daniel Sikes ('21, \$1,000), Logan Kirby ('22)

Invited talks

2021, "Tracing microbial enzymes to geologic environments". Department of Mineral Sciences, National Museum of Natural History, Smithsonian Institution, Washington, DC.

2021, "Transcriptional evidence for a dormancy-like response to burial in Arctic marine sediments by Woeseiales/JTB255-MBG". Extreme Biology and Biophysics Research Coordination Network.

2020, "Tectonics and their control on oxidoreductase assemblages". ENIGMA Astrobiology Virtual Symposium.

2020, "Data science approaches reveal environmental drivers behind microbial oxidoreductase abundance in volcanic ecosystems". American Society of Microbiology DC Branch meeting, Washington, DC.

2019, "Influences of trace element chemistry on oxidoreductase evolution". ENIGMA seminar series, Rutgers University, Newark Campus, NJ

2019, "Predicted restructuring of microbial communities with climate change in Svalbard fjords". Department of Earth and Environmental Sciences, Rutgers University, Newark Campus, NJ.

2019, “Climate change and the microbial ferrous wheel: Implications of Arctic warming on biogeochemical cycling in sediments”. Department of Marine and Coastal Science, Rutgers University, Cook Campus, NJ.

2017, “High-resolution microbial community abundance and composition analysis of two iron-rich fjords, Kongsfjorden and Van Keulenfjorden, Svalbard (79°N): Implications for climate response”. Center for Biofilm Engineering, Montana State University, Bozeman, MT.

Recent Conference Proceedings

2022, “Genome-resolved Transcriptomic Evidence for Benthic Iron Cycling in Arctic Fjords, Svalbard (79°N)”. Buongiorno, J., Sipes, K., Wasmund, K., Loy, A., Lloyd, K.G., American Geophysical Union Meeting in Chicago, IL.

2022, “Linking plate tectonic settings and microbial functions on a global scale”. Bastoni, D., **Buongiorno, J.**, Morrison, S., Hazen, R., Prabhu, A., Eleish, A., Barry, P., Bekaert, D., Zahirovic, S., Narkar, S., Cardone, A., Giovannelli, D. Cortona Procaroti Meeting, Cagliari, Italy.

2021, “Outcomes and lessons learned from a partnership with East Tennessee Freedom Schools to involve K-12 students in authentic microbial ecology research”. **Buongiorno, J.**, Phillips, E. K., Stokes, M., Coleman-King, C., Steen, A. D. American Geophysical Union Meeting in New Orleans, LA.

2021, “Genome-resolved metatranscriptomics of cryoconite microbial communities in Canada and Taylor Glaciers, Taylor Dry Valley, Antarctica”. **Buongiorno, J.**, Sommers, P., Friar, L., Schmidt, S. American Geophysical Union Meeting in New Orleans, LA.

2021, “Subsurface Landscape of a Chemolithoautotrophy-based Ecosystem”. Rogers, T. J., **Buongiorno, J.**, Schrenk, M., de Moor, M., Barry, P., Jessen, G. L., Basil, M., Selci, M., Giovannelli, D., Lloyd, K. G. American Geophysical Union Meeting in New Orleans, LA.

2021, “Helium isotope characteristics of Andean Convergent Margin geothermal fluids”. Barry, P., Bekaert, D. V., Curtice, J., Jessen, G. L., Schrenk, M., Chiodi, A., Rogers, T. J., Seltzer, A., de Moor, M., Giovannelli, D., **Buongiorno, J.**, Ramierz, C. J., Lloyd, K. G. American Geophysical Union Meeting in New Orleans, LA.

2021, “Geosphere-Biosphere feedbacks through time: insight from the emergence and evolution of metabolism”. Bastoni, D., **Buongiorno, J.**, Morrison, S., Hazen, R., Prabhu, A., Eleish, A., Barry, P., Bekaert, D., Zahirovic, S., Cordone, A. and Giovannelli, D. Goldschmidt virtual conference

2021, Bastoni, D., **Buongiorno, J.**, Morrison, S., Hazen, R., Prabhu, A., Eleish, A., Barry, P., Bekaert, D., Zahirovc, S., Cordone, A., Giovannelli, D., “Linking plate tectonic settings and microbial functions on a global scale”. Goldschmidt, Lyon, France.

2020, **Buongiorno J.**, Giovannelli D, DeMoor M, Barry P, Shrenk M, Lloyd K, Nakar S, Morrison S & Hazen R. “An integrated machine learning approach reveals geochemical controls on microbial electron-transfer protein abundance”. Goldschmidt, Virtual.

2019, Giovannelli, D., **Buongiorno, J.**, Prabhu, A., Eleish, A., Huang, F., Fox, P. A., Hazen, R., Morrison, S. M., “Tracking the evolution of our planet using large scale geochemistry and metagenomic data”. American Geophysical Union meeting in San Francisco, CA.

2019, **Buongiorno, J.**, Morrison S., Giovannalli D., Shrenk M., Barry P., DeMoor, M., Lloyd K.G., & Hazen R., “Using data science tools to unravel interactions between microbial communities and their geologic environment”. Deep Carbon Observatory: Decade of Discovery, Washington, DC.

2019, **Buongiorno, J.**, Fullerton K., Rogers T., Giovannalli D., DeMoor M., Barry P., Shrenk M., Lloyd K., Morrison S. & Hazen R., “Interactions between microbial communities and their geologic environment at the Costa Rica active margin”. Goldschmidt, Barcelona, Spain.

2019, **Buongiorno, J.**, Wasmund, K., Loy, A., Lloyd, K. G., “Genomic and transcriptional evidence for physiological responses to burial of the dominant carbon-fixing clade Woeseiaceae in Arctic fjord sediment”. 2nd Annual Geobiological Society Meeting, Banff, Canada.

2018, **Buongiorno, J. A.** Szykiewicz, A. Faiia, L. Herbert, L. Wehrmann, Lloyd, K. G., “Biological catalysis of a complete iron and sulfur cycle in Arctic marine fjord sediments, Van Keulenfjorden, Svalbard(79°N)”. International Symposium on Microbial Ecology in Leipzig, Germany.

2018, **Buongiorno, J.**, Szykiewicz A., Faiia, A., Yeager K., Schindler, K., Lloyd, K. G., “Microbial community data supports biologically mediated cryptic sulfur cycling in Arctic sediments, Van Keulenfjorden, Svalbard (79°N)”. Southeastern Geological Society of America Meeting, Knoxville, TN.

2017, **Buongiorno, J.**, Szykiewicz A., Faiia, A., Yeager K., Schindler, K., Lloyd, K. G., Environmental drivers of microbial abundance and composition in Arctic sediments, Kongsfjorden and Van Keulenfjorden, Svalbard (79°N): Evidence from stable and radioactive isotopes”. American Geophysical Union Meeting in New Orleans, LA.

2017, **Buongiorno J.**, Lloyd, K., “Network analysis of microbial communities show complex ecological linkages in Arctic fjord sediments, Van Keulenfjorden, Svalbard, (79°N)”. KY-TN branch of ASM meeting, Cookeville, TN.

2017, **Buongiorno J.**, Lloyd, K., “High resolution microbial community analysis of sediments from the high Arctic, Kongsfjorden and Van Keulenfjorden, Svalbard”. 4th Annual Southeastern Biogeochemistry Symposium in Athens, GA.

Teacher Training & Certifications

Environmental Data-data Driven Inquiry & Exploration (EDDIE) Faculty Mentoring Network	2021
QUBES BIOME Institute	2021
ASM webinar series – Teaching Undergraduate Biology	2021
UT Center for the Integration of Research, Teaching, and Learning	
Scholar Level Certification	2017
Practitioner Level Certification	2016
Best Practices in Teaching Pedagogy course	2016

Guest lectures

Department of Microbiology; Bioinformatics course, Metatranscriptomics and MAGs Fall 2019

Division of Biology; Cellular and Molecular Biology course, Energy and Enzymes Fall 2016

Department of Earth and Planetary Sciences; Earth, Life, and Time course, Fossil records Spring 2014

Teaching Experience

Division of Natural Sciences, Maryville College, Maryville, TN	
<i>First-Year Seminar</i>	Fall 2022
<i>Bioinformatics</i>	Spring 2022
<i>Principles of Microbiology</i>	Fall 2021
<i>Earth System Science</i>	Spring 2021, 2023
<i>Principles of Environmental Science</i>	Spring 2021
<i>Organismal Biology</i>	2020-2022
 Bioinformatics Virtual Coordination Network	Spring 2020
Software Carpentry Workshop	Dec. 2017
Division of Biology Graduate Teaching Assistant, Univ. of TN, Knoxville	2014-2015
<i>Organization/Function of the Cell</i>	
<i>Cellular and Molecular Biology</i>	
Tennessee Governor's School for the Sciences and Engineering	
<i>Biodiversity and Evolution</i>	June 2013
<i>Scientific Thinking</i>	June 2014
Earth and Planetary Sciences Dept., Univ. of TN, Knoxville	2012 – 2014
<i>Historical Geology</i>	
<i>Environmental Geology</i>	
<i>Paleobiology</i>	
Biology Dept., TN Technological Univ., Cookeville	2009 – 2011
<i>General Biology II</i>	
<i>General Biology I</i>	
<i>Zoology</i>	

Field Experience

Convergent Margin of Chile	March 2022
Hot springs in the Andean Puna, Argentina (4600m asl)	Feb. 2019
Kongsfjorden; Smeerenburgfjorden, Svalbard (79°N); Team lead	July 2017
Kongsfjorden, Svalbard (79°N)	August 2016
Long Valley Caldera, California	June 2015
Laguna Verde Complex, Andes Mountains, Argentina (4100m asl); Team lead	August 2013

Skills and Training

NASA Ocean Worlds Site Selection Workshop	2022
4D (Deep-Time Data-Driven Discovery) Workshop	2020
Next Generation of Polar Researchers Workshop	2019
Networks and Machine Learning Workshop	2019
Communications Bootcamp for Scientists (American Institution for Biological Sciences)	2019
Bystander Training	2017
Software Carpentry Workshop	2015
Computational Microbiology Workshop (C-DEBI)	2015

Research

Carnegie Institution for Science, Earth and Planets Laboratory, Washington, DC

2019 – 2020 (remain ENIGMA team member)

PI: Robert Hazen, Ph.D.

NASA Astrobiology Institute project: *Evolution of Nanomachines in Geospheres and Microbial Ancestors* (ENIGMA) (<https://enigma.rutgers.edu/>)

The abductive study of environmental metagenomes and co-located geochemistry to untangle the co-evolution of microbial oxidoreductase enzymes and their geologic environment. Using data-driven discovery approaches, cluster analysis, network science, and cutting-edge visualization techniques to find emergent properties within large datasets.

University of Tennessee, Knoxville

PI: Karen G. Lloyd, Ph.D.

2014-2018

The role of uncultured microbes in the Arctic marine sediment carbon cycle

Performed high resolution molecular analyses of microbial abundance, population structure, and biological function by coupling next generation sequencing of metagenomes, transcriptomes, and metabolomes with geochemical data of the anoxic sediment environment of Svalbard (79°N) to discover that depositional environment is a strong control on the distribution of anaerobic respiration pathways.

Evolutionary adaptations and metabolic pathways of methanogens in Antarctic Permafrost

Reconstructed the first publicly available methanogen genome from Antarctic permafrost. I also performed protein structure modeling, phylogenetics, and pathway reconstruction to determine structural adaptations to its harsh, cold environment and found several pathways by which methane can be generated with future warming conditions.

The deep biosphere in Baltic Sea Basin sediments

Collected and compared quantitative PCR data and direct cell counts of the Baltic Sea deep subsurface biosphere in an interlaboratory meta-analysis that found CARD-FISH is severely limited in its utility in energy-starved, low biomass sediments.

PI: Linda C. Kah, Ph.D.

2012-2014

Mineralized microbialites as archives of environmental evolution of a hypersaline lake basin: Laguna Negra, Catamarca Province, Argentina

Performed geomicrobiological analyses on microbial carbonates from the High Andes, NW Argentina in collaboration with the University of Córdoba, Argentina and The National Scientific and Technical Research Council (CONICET). This work coupled carbon and oxygen isotope analysis with mineralogical, organic matter, and petrographic observations to establish the utility of microbialites as faithful records of lake basin evolution.

Professional Affiliations

Migrations in Harmony Research Coordination Network

American Society for Microbiology (ASM)
Explorer's Club (Term member)
International Society of Microbial Ecology (ISME)
Council for Undergraduate Research
American Geophysical Union (AGU)

Recent Synergistic Activities

Conference session chair, at AGU, 2022

Dec. 2022

Title: "Investigating Microbial Metabolism in the Archaeon Eon"

Conference session convener of Education session at AGU, 2021

Dec. 2021

Title: "Innovative approaches in geoscience education via university-K12 partnerships"

Editorial Board Member, *International Society of Microbial Ecology* Journal. April 2021 - present

Conference session convener, Virtual Goldschmidt 2020

June 2020

06h Harnessing Multidimensionality in Complex, Co-evolving Earth

Systems

9e Recognizing Preserved Microbial Signatures in Modern and Ancient

Environments

Peer reviewer

Geobiology

Frontiers in Microbiology

International Society of Microbial Ecology Journal (ISME J)

Applied and Environmental Biology

Microbial Ecology

Microbiome

mSystems

Review panelist

NASA

Joint Genome Institute (DOE)

NSF

Service, Mentoring, and Outreach

Senior thesis advisor, Maryville College (MC)

2020 – present

Mentoring/advising of undergraduate students, Univ. Tenn, MC

2016 – present

C-DEBI (Center for Dark Energy Biosphere Investigations)

2021 – 2022

Coordinator of Networked Speaker Series attended remotely by international
leaders in geomicrobiology

East TN Freedom Schools

Unfunded collaborator on NSF IUSE:[IUSE:GEOPATHs](#) grant (Integrating Continuous
Experiential Activities for Geoscience Education)

Summer 2021, 2022

STEM Video Lesson Content Creator

Summer 2020

Producer of Scientific Programming/Volunteer Coordinator

Summer 2018

500 Women Scientists

Member of National Leadership	2017 – 2019
Knoxville Pod Coordinator	2017 – 2018
American Institute of Biological Sciences Congressional Visits Day, Capitol Hill	2018
Career Planning Task Force, Univ. Tenn.	2017 – 2018
Dean's Graduate Student Advisory Council Representative, Univ. Tenn.	2017 – 2018
Media Relations Officer, Forum of Science Ethics and Policy, Univ. Tenn.	2017 – 2018
tnAchieves Mentor	2016 – 2017
Social Media Coordinator for Univ. Tenn. Department of Microbiology	2016 – 2017
Southeastern Biogeochemistry Symposium, student steering committee	2016
Darwin Day, Univ. Tenn.	
Head of advertising	2016
Co-president	2015
McClung Museum Exhibitor of Geobiology Research	2015
Ciencia Puerto Rico Benefit, Knoxville, TN (Organizer and presenter)	2017
Science outreach visits	
Sunbright Elem., Morgan Co., TN	2017
Camp Creek Elem., Greene Co., TN	2017
Bearden Elem., Knox Co., TN	2017
Spring Hill Elem., Knox Co., TN	2014
Algood Elem., Putman Co., TN	2011