TATYANA (Tanya) A. SYSOEVA
Department of Biological Sciences
The University of Alabama in Huntsville
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EDUCATION

Ph.D. Biochemistry & Molecular Biology, The Pennsylvania State University, USA	2011
M.S.(Hons) Materials Science, Moscow State University, Russia	2004
B.S. Materials Science, Moscow State University, Russia	2002

POSITIONS

Center for Women's Reproductive Health, UAB — **Associate Scientist** — 2023 – present

The University of Alabama in Huntsville — **Assistant/Associate Professor** — 2018 - present

Understanding human urinary microbiome development and interactions of uropathogens and commensal bacteria; Analyzing horizontal gene exchange mechanisms as it applies to spreading of antibiotic resistance in environments related to human health and built environments

Duke University — **Duke KURe K12 Scholar** — 2017 - 2018

PI: Lingchong You — **Research Scientist** — 2015 - 2017

Developing approaches to detect and quantify horizontal gene transfer (HGT) and analyzing effects of stressors on HGT efficiency using a combination of synthetic and molecular biology tools.
Characterization of the antibiotic resistant uropathogens for their ability to mobilize resistance genes into urinary commensals, using functional and nextgen sequencing approaches.

2011- 2015

Harvard University — **Postdoctoral Fellow**

PI: Briana Burton

Studied function and mechanism of the Type VII secretion system in *Bacillus subtilis* and *Mycobacterium tuberculosis* with focus on the protein substrate recognition and mode of translocation by the secretion machinery using functional and biochemical assays and bacterial genetics.

Analyzed structure and function of proteins involved in DNA uptake in *B. subtilis*.

Pennsylvania State University — **Ph.D. Student** — 2006-2011

PI: Tracy Nixon

Studied structure-function aspects of sigma54-dependent transcription activation by a bacterial AAA+ ATPase applying methods of molecular biology, protein biochemistry in combination with structural methods such as small-angle solution X-ray and neutron scattering and X-ray crystallography.

PUBLICATIONS

EF Briggs, B Ghimire, JA Mayo, MS Kelly, KG Xu, TA Sysoeva. Propagation of antibacterial cold atmospheric pressure plasma through small-bore tubing. PLOS One.(accepted) 2025

LY London, CH Lim, JL Modliszewski, NY Siddiqui, TA Sysoeva. Draft genomes of *Klebsiella pneumoniae* and *Streptococcus anginosus* strains found in the urine of the same female patient. Microbiology Resource Announcements, e01311-24. 2025

YA Velez Justiniano, ME Ledford, SL Castro-Wallace, HN Nguyen, TA Sysoeva. More Than a Decade of International Space Station Microbial Sampling in the Environmental Control and Life Support Systems. 53rd International Conference on Environmental Systems Proceedings. 2024

S Mirmohammadsadeghi, D Juhas, M Parker, K Peranidze, DA Van Horn, A Sharma, D Patel, TA Sysoeva, V Klepov, V Reukov. The Highly Durable Antibacterial Gel-like Coatings for Textiles. Gels, 10(6), 398; https://doi.org/10.3390/gels10060398 2024

LM Jeries, TA Sysoeva, L Karstens, MS Kelly. Synthesis of current pediatric urinary microbiome research. Front. Pediatrics doi: 10.3389/fped.2024.1396408 2024

MS Kelly, E Dahl, LM Jeries, TA Sysoeva, L Karstens. Characterization of pediatric urinary microbiome at species-level resolution indicates variation due to sex, age, and urologic history. J.Ped.Urol. https://doi.org/10.1016/j.jpurol.2024.05.016 2024

LY London, CH Lim, JL Modliszewski, NY Siddiqui, TA Sysoeva. Draft genomes of *Lactobacillus delbrueckii* and *Klebsiella pneumoniae* coexisting within female urinary bladder. Microbiology Resource Announcements, e00305-23, https://doi.org/10.1128/MRA.00305-23 2023

CL Castro, YA Velez-Justiniano, S Stahl-Rommel, HN Nguyen, A Almengor, B Dunbar, RJC McLean, TA Sysoeva, SL Castro-Wallace. Genome Sequences of Bacteria Isolated from the International Space Station Water Systems. Microbiology Resource Announcements, e00158-23. doi.org/10.1128/mra.00158-23 2023

B Ghimire, EF Briggs, TA Sysoeva, JA Mayo, KG Xu. Contrasting the Characteristics of Atmospheric Pressure Plasma Jets Operated with Single and Double Dielectric Material: Physicochemical Characteristics and Application to Bacterial Killing. J. Phys D: Applied Physics, 56(8), 085205. doi.org/10.1088/1361-6463/acb602 2023

YAV Justiniano, DM Goeres, EL Sandvik, BV Kjellerup, TA Sysoeva, JS Harris, S Warnat, M McGlennen, CM Foreman, J Yang, W Li, CD Cassilly, K Lott, LE HerrNeckar. Mitigation and use of biofilms in space for the benefit of human space exploration. Biofilm, 100102. doi.org/10.1016/j.bioflm.2022.100102 2023

YA Velez Justiniano, CH Lim, DS Dunlap, TA Sysoeva. Genome Sequences of Three Common Bacterial Isolates from Wastewater from the Water Processor Assembly at the International Space Station. Microbiology Resource Announcements, e01189-22. doi.org/10.1128/mra.01189-22 2023

Johnson JA, Delaney LF, Ojha V, Rudraraju M, Hintze KR, Siddiqui NY, Sysoeva TA. Commensal urinary lactobacilli inhibit major uropathogens *in vitro* with heterogeneity at species and strain level. Front. Cell. Infect. Microbiol. doi: 10.3389/fcimb.2022.870603 2022

Johnson JA, Modliszewski JL, Siddiqui NY, Sysoeva TA. Draft Genome Sequence of a *Lactobacillus gasseri* Strain Isolated from the Catheterized Urine of a Healthy Postmenopausal Woman. Microbiology Resource Announcements, e00021-22 doi.org/10.1128/mra.00021-22 2022

Starcic Erjavec, M., Jeseničnik, K., Elam, L. P., Kastrin, A., Predojević, L., & Sysoeva, T. A. (2022). Complete sequence of classic F-type plasmid pRK100 shows unique 2022

conservation over time and geographic location. *Plasmid*, *119–120*, 102618. doi.org/10.1016/J.PLASMID.2022.102618

Phillips, A. M., Sanchez, S., Sysoeva, T. A., Burton, B. M., & Kearns, D. B. (2021). Molecular and Cell Biological Analysis of SwrB in Bacillus subtilis. *Journal of Bacteriology*, *203*(17). doi.org/10.1128/JB.00227-21 2021

Karstens L., Siddiqui N.Y., Zaza T., Barstad A., Amundsen C.L., Sysoeva T.A., Benchmarking DNA isolation kits used in analyses of the urinary microbiome. *Sci Rep* 11, 6186. https://doi.org/10.1038/s41598-021-85482-1 2021

Sysoeva T.A., Kim Y., Rodriguez J., Lopatkin A.J., You L. Growth-stage-dependent regulation of conjugation, AIChE Journal, https://doi.org/10.1002/aic.16848 2020

Zhu K., Chen S., Sysoeva T.A., You L. Universal antibiotic tolerance arising from antibiotic-triggered accumulation of pyocyanin in *Pseudomonas aeruginosa*. PLoS Biol 17(12): e3000573. https://doi.org/10.1371/journal. pbio.3000573 2019

Dai Z., Lee A.J., Roberts S., Sysoeva T.A., Huang S., Dzuricky M., Yang X., Chilkoti A., You L. Versatile biomanufacturing by a hybrid biological-material system. Nat Chem Biol, **15**, 1017–1024. 2019

Sysoeva T.A. Assessing heterogeneity in oligomeric AAA+ machines. Cell Mol Life Sci. 74 (6): 1001-1018. 2017

Sysoeva T.A., Burton B.M. A new front for intermicrobial wars. Nat Microbiology, 2, 16254. 2016

Lopatkin A.J., Sysoeva T.A., You L. Dissecting the effects of antibiotics on horizontal gene transfer: Analysis suggests a critical role of selection dynamics. BioEssays 38(12):1283-1290. 2016

Lopatkin A.J., Huang S., Smith R., Srimani J., Sysoeva T.A., Bewick S., Karig D., You L. Antibiotics as a selective driver for conjugation dynamics. Nat Microbiology, 1, 16044. 2016

Sysoeva T.A., Bane L.B., Xiao D.Y., Bose B., Chilton S.S., Gaudet R., Burton B.M., Structural characterization of the late competence protein ComFB from *Bacillus subtilis.* Biosci Rep, 35(2) 2015

Ramsdell T.L., Huppert L.A., Sysoeva T.A., Fortune S.M., Burton B.M., Linked Domain Architectures Allow for Specialization of Function in the FtsK/SpoIIIE ATPases of ESX Secretion Systems, J Mol Biol, 427(5):1119-1132. 2015

Sysoeva T.A., Huppert L.A, Zepeda-Rivera M.A., Burton B.M. Dimer recognition and secretion by the ESX Secretion System in *Bacillus subtilis.* Proc Natl Acad Sci U S A, 111(21):7653-7658. 2014

Sysoeva T.A., Chowdhury S., Guo L., Nixon B.T. Nucleotide-induced asymmetry within ATPase activator ring directs sigma54-RNAP interaction and ATP hydrolysis. Genes Dev, 27:2500-2511. The paper was highlighted on the journal cover as “also in this issue”. 2013

Sysoeva T.A., Yennawar N., Allaire M., Nixon B.T. Crystallization and preliminary X-ray analysis of a sigma54-dependent transcription activator NtrC1 from *Aquifex aeolicus* bound to ground state ATP analog Acta Cryst. F69, 1384-1388. 2013

Chen B., Sysoeva T.A.*, Chowdhury S., Guo L., De Carlo S., Hanson J.A., Yang H., and Nixon B.T., Engagement of arginine finger to ATP triggers large conformational changes in NtrC1 AAA+ ATPase for remodeling bacterial RNA polymerase. Structure (Cell Press), 18(11):1420-1430. **Co-first author*. The paper was chosen for the journal cover. Publication was accompanied by a comment of Professors T Hoover and M Buck. 2010

Chen B., Sysoeva T.A., Chowdhury S., Guo L., and Nixon B.T. ADPase activity of recombinantly expressed thermotolerant ATPases may be caused by co-purification of adenylate kinase of *Escherichia coli*. FEBS J, 276:807-815. 2009

Chen B., Sysoeva T.A., Chowdhury S., and Nixon B.T. Regulation and action of the bacterial enhancer binding AAA+ ATPases. Biochem. Soc. Transact, 36:89-93. 2008

PUBLISHED CONFERENCE ABSTRACTS

YA Velez-Justiniano, ME Ledford, SL Castro-Wallace, HN Nguyen, TA Sysoeva. 2024. More Than a Decade of International Space Station Microbial Sampling in the Environmental Control and Life Support Systems. 53rd International Conference on Environmental Systems Proceedings

Carbapenem-resistant *Enterobacteriaceae* Isolates from Duke University Hospital Characterized via Whole Genome Sequencing. Elam LP, Lim CH, Chittur K, Addison R, Lewis SS, Smith BA, Anderson D, Sysoeva TA. 2022. Journal of Urology, V. 207, Issue Supplement 5, P. e547. doi.org/10.1097/JU.0000000000002583.01

Characterization of complement resistance factor TraT encoded in drug-resistance plasmids of uropathogenic *Escherichia coli*. Lim CH, Bhati A, Lott K, Whitfield J, Land BJ, Sysoeva TA. Journal of Urology, V. 207, Issue Supplement 5, P. e14. doi.org/10.1097/JU.0000000000002514.11

Sysoeva T.A., Kim Y., You L. Regulation of conjugative transfer of β-lactam resistance from uropathogenic strains of *Escherichia coli*, The Journal of Urology, 2018, 199(4):e285, doi: 10.1016/j.juro.2018.02.743

Sysoeva T.A., You L. Regulation of conjugative transfer of β-lactam resistance from uropathogenic strains of *E. coli*. Neurourology and urodynamics, 2018, 37, S529-S530

Sysoeva T.A., Huppert L.A., Ramsdell T.L., Fortune S.M., Burton B.M. Recognition of the WXG Substrate YukE by the Type VII Secretion System in *Bacillus subtilis FASEB J, 2013 27:554.6*

Sysoeva T.A., Chowdhury S., Guo L., Nixon B.T. Structural mechanism of sigma54-dependent AAA+ ATPases *FASEB J, 2011 25:699.13*

Nixon B.T., Sysoeva T.A., Chowdhury S., Chen B., Guo L. Sequential Action of ATP on the Enhancer Binding AAA+ ATPase NtrC1 *FASEB J, 2009 23:495.21*

Nixon B.T., Sysoeva T.A., Chen B., Chowdhury S., Guo L., De Carlo S., Hanson J., Yang H. AAA+ ATPase Mechanism *Biophysical J. 2011100 (3):1, 38a*

NON-REFEREED ARTICLES

Microbiology of Horizontal Gene Transfer and Microgravity Biofilms. Velez Justiniano, Y-A., Doerfert S.N., Sysoeva T.A. 2021 for the National Academies Decadal Survey on Biological and Physical Sciences Research in Space 2023-2032

Considerations for Use of Low-Temperature Gas Plasmas for Mitigation of Biofilms in Microgravity Environments. Bhatt K., Mayo J., Xu G., Ramsey D., Sysoeva T.A. 2021 for the National Academies Decadal Survey on Biological and Physical Sciences Research in Space 2023-2032

Mitigation and Use of Biofilms in Space for the Benefit of Human Space Exploration, Velez Justiniano, Y-A., Goeres D., Sandvik E., Kjellerup B.V., Sysoeva T.A., Lott K., Harris J., Foreman C., McLean R.J.C., Yang J., Li W., O'Rourke A., Cassilly C. 2021 for the National Academies Decadal Survey on Biological and Physical Sciences Research in Space 2023-2032

Sysoeva T.A., Chowdhury S., Nixon B.T. Breaking symmetry in multimeric ATPase motors. Cell Cycle, 13(10):1509-1510. 2014

AWARDS & FUNDING

NASA ROSES 2024	2025-2027
AEOP	2024-2026
UAH 2023 College of Sciences Outstanding Faculty Member Award	2023
American Society for Microbiology Peggy Cotter Award for Early Career Members	2023
NASA MSFC CAN Award ($118K, $39K to UAH)	2022-2023
CAIRIBU (NIH NIDDK) Opportunity Pool Award ($148K to UAH)	2022-2023
R01 Award subcontract from Vanderbilt University (PI Maria Hadjifrangiskou, $2,892K, $728K to UAH)	2022-2027
Army Educational Outreach Program 2022-23 award ($6K to UAH)	2022-2023
Best Selected Talk, Microbiome Virtual International Forum (April MVIF)	2022
CPU2AL Seed Grant ($40K, $35K to UAH)	2021
Duke CNR Pilot Award	2021
CAIRIBU (NIH NIDDK) Collaboration Award ($99K, $32K to UAH)	2021
Army Educational Outreach Program REAP 2021 award ($3K to UAH)	2021
New Faculty Research grant ($10K), UAH	2018-2019
NIH NIDDK K12 Career Development Award (KURe Scholar in Benign Urology)	2017-2018
Duke Scholar in Molecular Medicine (Infectious Diseases Track)	2017-2018
Keystone Symposia Future of Science Fund Scholarship	2011
Honorable mention for the Robert T. Simpson Innovative Research Award	2010
WISE Travel Grant	2010
Braddock Graduate Fellowship	2006
2nd Prize Poster competition, Conference Lomonosov-1999, Moscow State University, Moscow, Russia	1999

OTHER FUNDING AND CONTRACTS

Contract with Oregon Science and Health University	2021-2022
Contract with Jacobs company	2021
Contract with MotusApp company	2021

CONFERENCE PARTICIPATION AND SEMINAR SERIES (Oral presentations only)

National Academy of Science, Committee on Planetary Protection - Fall meeting	2024
Department of Chemistry, CSISC Series, UAH	2024
Invited Panel Speaker, SUFU 2024 meeting	2024
Department of Biological Science Seminar, UAH	2023
Invited Seminar, UAB Center for Women Reproductive Health	2023

Invited Seminar, UAB, Heersink School of Medicine, Department of Microbiology	2023
Invited talk, Annual CAIRIBU Meeting	2022
Invited Seminar, Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University	2022
Selected Talk, Penn State Changing Microbiome Symposium	2022
Selected Talk, Microbiome Virtual International Forum (April MVIF)	2022
Drug resistant urinary tract infections, Annual CAIRIBU Meeting, virtual	2021
Career Workshop "*Job Search Process*", Annual CAIRIBU Meeting, virtual	2021
Invited Seminar, HudsonAlpha Institute for Biotechnology, Huntsville, AL	2020
Invited Seminar, Department of Biological Sciences, UT Dallas, Richardson, TX	2019
Early Career Investigator Workshop AUA Linthicum, MD. *Growth-stage regulation of plasmid conjugation in uropathogenic E. coli*	2018
O'Brien Urology Center Spring Symposium, University of Wisconsin in Madison, WI, *Regulation of conjugative transfer of β-lactam resistance from uropathogenic strains of Escherichia coli.*	2018
Duke Pelvic Medicine Research Consortium, Durham, NC, *Contribution of Antibiotic Resistant Urinary Tract Infections in Spreading of Drug Resistance Genes.*	2017
Bacillus Supergroup Meeting, MIT, Cambridge, MA *Dimer recognition and secretion by the ESX Secretion System in Bacillus subtilis.*	2014
Gordon Research Conference "Protein Transport Across Cell Membranes", Galveston, TX, *Dimer recognition and secretion by the ESX Secretion System in Bacillus subtilis* (*selected from abstracts*).	2014
Gordon Research Seminar "Protein Transport Across Cell Membranes", Galveston, TX, *Characterization of recognition and translocation of WXG substrate by Type VII Secretion System in Bacillus subtilis* (*selected from abstracts*).	2014
Cellular Dynamics Seminar Series, Harvard University, MA, *Dimer recognition and secretion by the ESX Secretion System in Bacillus subtilis.*	2014
ASBMB Annual meeting, Boston, MA, *Recognition of the WXG Substrate YukE by the Type VII Secretion System in Bacillus subtilis* (*selected from abstracts*).	2013
Seminar at Department of Molecular Biosciences, Northwestern University, IL, *Structural studies of the AAA+ ATPase NtrC1 from Aquifex aeolicus.*	2011
Keystone Symposium "AAA+ and Related ATP-Driven Protein Machines: Structure, Function and Mechanism", Granlibakken Resort, Tahoe, CA, *Intricate interactions among subunits within the ring of an AAA+ ATPase* (*selected from abstracts*).	2011
Workshop "Hydrodynamic and Thermodynamic Analysis of macromolecules with SEDFIT and SEDPHAT", NIH, Bethesda, MD, *Structural studies of the Enhancer-Binding, AAA+ ATPase NtrC1 upon nucleotide binding.*	2010
ASBMB Annual meeting, New Orleans, LA, *Sequential action of ATP on the enhancer binding AAA+ ATPase NtrC1*.	2009

ADDITIONAL TRAINING & COURSES

Teach 2 INCLUDE Conference, UAH	2023
Quality Educational Practices Online (QEPO) Training and Certification	2020
Duke Scholar in Infectious Diseases	2017-2018

Duke Genomic and Computational Biology Academy 2017 (Introduction to DNA Sequencing Technologies; Introduction to Scientific Computing for Genomics, 16S Analysis Workshop)	2017
SBGrid/NE-CAT 2014: Data Processing in Crystallography, Boston, MA	2014
Advanced Bacterial Genetics Course at Cold Spring Harbor Laboratory, NY	2013
Workshop “Hydrodynamic and Thermodynamic Analysis of Macromolecules with SEDFIT and SEDPHAT”, NIH, Bethesda MD	2010
Workshop “Solution Studies of Macromolecules: Global and Local Structure", Brookhaven National Laboratory, Upton NY	2009
Rapid Data Collection and Structure Solving at the NSLS, Brookhaven National Laboratory, Upton NY	2008
Workshop “Cryo and 3D electron microscopy”, Penn State, University Park, PA	2007

STUDENTS MENTORED

Bram Sterling – graduate rotation student, January-March 2012
Aaron Bose – graduate rotation student, January-March 2013
Martha Zepeda-Rivera – graduate rotation student, January-March 2013
Denise Sirias – graduate rotation student, January-March 2013
Kathrin Schulz – master exchange student, May-November 2013
Alice Berenson – spring volunteer and PRISE summer student, January-August 2013
Sydney Reed – undergraduate student and MSI summer student, January 2014-May 2015
Lauren Bougioukas – summer intern, June-August 2014
Alana Ganz – undergraduate student, February-May 2015
Jonathan Bethke – graduate rotation student, March 2016
Gideon Pfeffer – summer student, May- July 2016
Youlim Kim – independent research project undergraduate student October 2016-May 2018
Ahmed Ahad – undergraduate volunteer October 2016 – July 2017
Connor Pfeiffer – independent study student, August 2017 – April 2018
Jonathan Rodriguez - independent Study undergraduate student, September 2017 - May 2018
Quiana Vidal – rotation graduate student, October 2018 - December 2018
Shahid Khan – rotation graduate student, January 2019 - February 2019
Savanie Fernando – graduate student, August 2018 – September 2019
Tamara Zaza – undergraduate and RCEU student, August 2018 – April 2020
Vasudhasri Devarasetty – honors capstone student, December 2018 – December 2019
Carolina Dolislager – undergraduate student, January 2019 – May 2019
Robert Chappell – undergraduate student, January 2019 – May 2019
Lauren Elam – undergraduate and RCEU student, MS student - November 2018 – December 2021
Yo-Ann Velez – BSE graduate student, January 2019 – current
Ray Griffin – undergraduate student, May 2019 – December 2019
Wren Jenkins – undergraduate student, January 2020 – May 2021
Brad Land – MS student, September 2019 – July 2021
Antonio Bradley – MS student, November 2019 – April 2022
Katelyn Lott – MS student, January 2020 – December 2022
James Johnson – undergraduate student, July 2020 – August 2021
Lydia Delaney - RCEU nursing student, May 2020 – August 2020
Chae Hee Lim – RCEU and undergraduate student, September 2020 – July 2023
Alexandra LaMear - RCEU student, May 2021 – August 2021

Jazmyn Whitfield - RCEU student, May 2021 – August 2021
Foster Sims - RCEU student, May 2021 – August 2021
Victor Dunagan – AEOP High school student, June – July 2021
Medha Rudraraju – AEOP High school student, June – July 2021
Vaishali Ojha – AEOP High school student, June – July 2021, Summer 2023
Kaylie Hintze – undergraduate honors student, MS student, July 2021 - present
Rachel McCullars – September 2021 – May 2022
Layla Jeries – RCEU and honors undergraduate student, MS student, December 2021 - present
Lanie Briggs – MS student, September 2021 – present
Aayushi Sharma – MS student, January 2022 – present
Rayan Haque – RCEU and undergraduate student, June 2022 – present
Amy LeBleu-DeBartola – PhD student, January 2023 – present
Dhruvi Patel – undergraduate student, January 2023 – present

GRADUATION RECORDS

Brad Land – MS student, Graduated August 2021
Lauren Elam – MS student, Graduated December 2021
Katelyn Lott – MS student, Graduated December 2022
Lanie Briggs – MS student, Graduated December 2023
Yo-Ann Velez Justiniano – BSE PhD student, Spring 2024
Aayushi Sharma – MS student, Graduated December 2024
Kristiana Josifi – MS student, Graduated December 2024
Kaylie Hintze – MS student, Graduated May 2025
Layla Jeries – MS student, Graduated August 2025

PROFESSIONAL SOCIETIES

Member of American Urological Association	2018-present
Member of American Society for Microbiology	2013-present
Member of American Association for the Advancement of Science	2010-2018
Member of American Society for Biochemistry & Molecular Biology	2009-2015

SCIENTIFIC COMMUNITY SERVICE

Editorial Board member - BMC Microbiology, Microbial Genomics

Ad hoc reviewer for Nucleic Acids Research, Journal of Molecular Biology, Acta Crystallographica (Section F), Antonie van Leeuwenhoek Journal of Microbiology, Biochemistry (Moscow), Bulletin of RSMU, PLOS One, Scientific Reports, Communications Biology, JoVe, Microbiology, Environmental Science and Technology, Diagnostics, Applied and Environmental Microbiology, Peer J, Pathogens, Antibiotics, mBio, mSystems.

Reviewer for CAIRIBU grants 2023, abstracts 2023-2024

Poster and presentation judge for NASREF 2019, 2021, AAMU STEM Day 2021, SEB ASM 2022

Organizing committee of Spring 2021, Fall 2021, 2022 Southeastern Branch of ASM meetings

Chair of the 2020 Southeastern Branch of ASM meeting, The University of Alabama in Huntsville, AL 2020

Organizing Blue Devil Resistome Bass Connection Research Project, Duke University 2017-2018

Co-chair of the Gordon Research Seminar on Bacterial Cell Surfaces 2016

Member of the organizing committee for Boston Bacterial Meeting 2014 and 2015

Fellowship Review Coordinator for Graduate Women in Science for annual fellowship awards 2012-2013

Assistance in preparation of 2010 Bridges STEM Symposium, Penn State University

TEACHING AND LEADERSHIP EXPERIENCE

Councilor of the Southeastern Branch of ASM, 2023-2026 term	2023-2026
Army Educational Outreach (AEOP) program with high school apprentices	2020-2024
Lectures and visits to James Clemens High School clubs, Sparkman High	2022-2023
AL Policy Committee member of the Southeastern Branch of American Society for Microbiology	2020-2023
President of the Southeastern Branch of American Society for Microbiology	2019- 2020
Lecturer for General Microbiology, Microbial Genetics, Senior Capstone, Bioethics, Next Generation Sequencing, Coronavirus and Other Germs, University of Alabama in Huntsville	2018-present
Member of the organizing committee of Women in Science and Engineering Annual Symposium, Duke University	2017
Instructor for LS100r Life Science research project, Harvard University	2014
Microbial Science Initiative (MSI) Journal Club leader at Harvard University	2014
Mentoring and instructing undergraduate and graduate students in their research projects in the lab	2012-2017
Mentor and active member at Harvard Graduate Women in Science and Engineering (HGWISE) and the Association for Women in Science, Massachusetts Chapter (MassAWIS)	2012-2014
Teaching Assistant for BMB 212 Elementary Biochemistry Laboratory, Penn State University	2007