



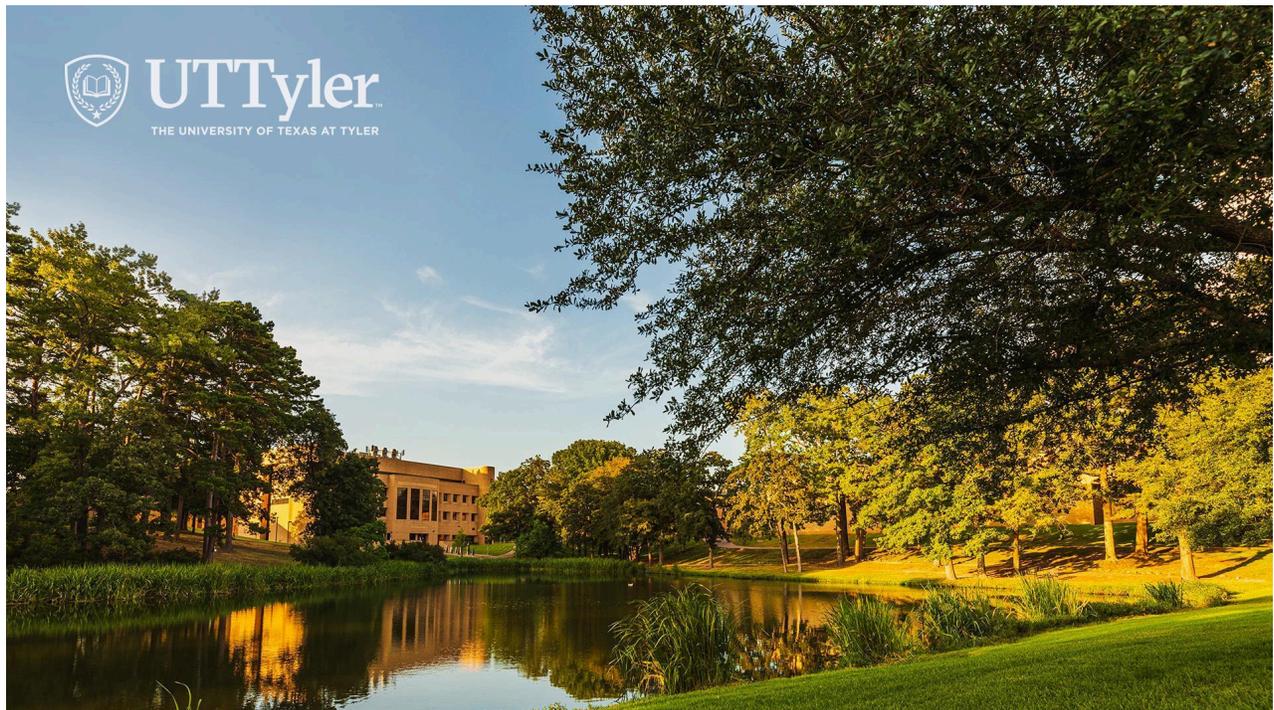
Program

2025 Fall Meeting

October 30 - November 1, 2025

University of Texas at Tyler

Tyler, Texas



If you still need to register



Thank you to our Sponsors!



UTTyler
**CENTER FOR
NTM INNOVATION**

UTTyler

**SCHOOL OF
MEDICINE**

- **UT-Tyler Scheduling and Conference Services**
- **Kappa Xi (UT-Tyler Chapter, Biology Honor Society)**
- **ASM Young Ambassador Program Fund (YAPF)**



OSPRI



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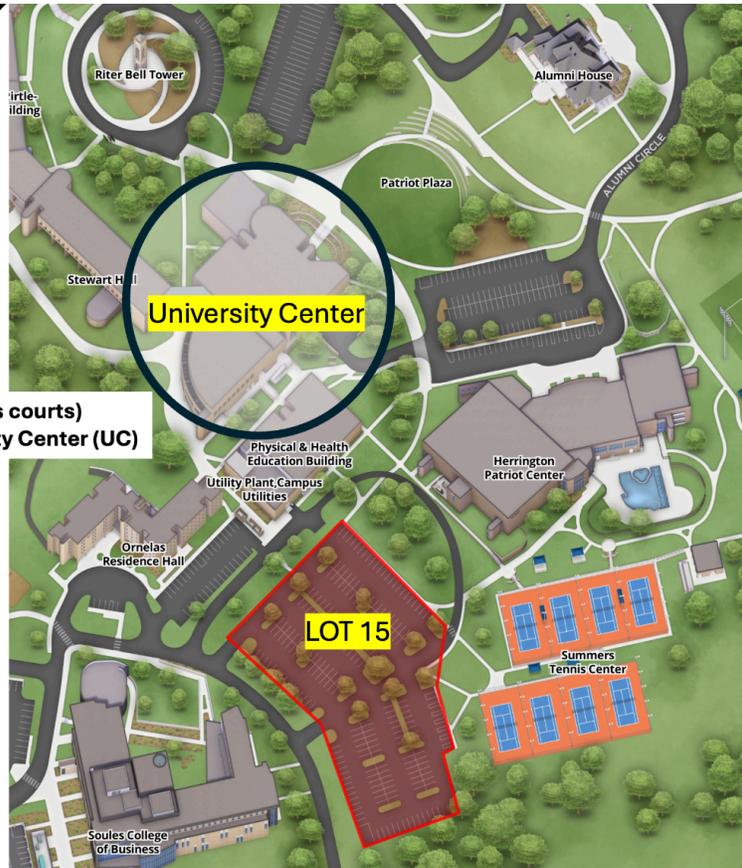
Graduate School of Biomedical Sciences

The Venue

University of Texas at Tyler
Address: University Center, 3900 University Blvd
Tyler, TX 75799



Park in Lot 15 (near tennis courts)
Events are held in the University Center (UC)



About UT Tyler

The University of Texas at Tyler is a centerpiece for learning, culture, and natural beauty in East Texas, located midway between Dallas and Shreveport, Louisiana. Founded in 1971, UT Tyler is one of the fastest-growing universities in the renowned University of Texas System.

With a mission to improve educational and health care outcomes for East Texas and beyond, UT Tyler offers more than 90 undergraduate and graduate programs to over 11,500 students. Through its alignment with UT Tyler Health Science Center and UT Health East Texas, UT Tyler has unified these entities to serve Texas with quality education, cutting-edge research, and excellent patient care. Classified by Carnegie as a doctoral research institution and by U.S. News & World Report as a national university, UT Tyler has campuses in Tyler, Longview, Palestine, and Houston.

Home to five academic colleges and three schools

- Ben and Maytee Fisch College of Pharmacy
- College of Arts and Sciences
- College of Education and Psychology
- College of Engineering
- Soules College of Business
- School of Health Professionals
- School of Nursing
- School of Medicine

Tyler Main Campus

More than 260 acres nestled in the beautiful pine and oak forests of East Texas. Key facilities include the Herrington Patriot Center, our state-of-the-art fitness center with a gymnasium that seats 2,000, and the R. Don Cowan Performing Arts Center, which is a cultural attraction for the entire region.

Degrees Offered

- Undergraduate Bachelor's Degrees = 49
- Graduate Master's Degrees = 37
- Doctoral Degrees = 6.

Enrollment

Total enrollment = 11,602

UT Tyler students represent 60+ nations, 45 states, and 167 Texas counties.

Students residing on campus = 1,722

Faculty = 648

Student-to-faculty ratio = 22:1

Most popular majors

- Nursing
- Education
- Management
- Kinesiology
- Psychology
- Criminal Justice
- Biology
- History
- Accounting
- Marketing

Forging Meaningful Connections Throughout East Texas

The University of Texas at Tyler serves students, patients, and the East Texas region through academics, research, and advanced healthcare delivery. Our approach yields outstanding results, and at the same time, we're one of the most affordable UT System campuses, leading to a more significant return on your investment. In considering how we support East Texas through education and economic development, we broaden our impact through intentional partnerships and collaborations.

Innovation at UT Tyler Research

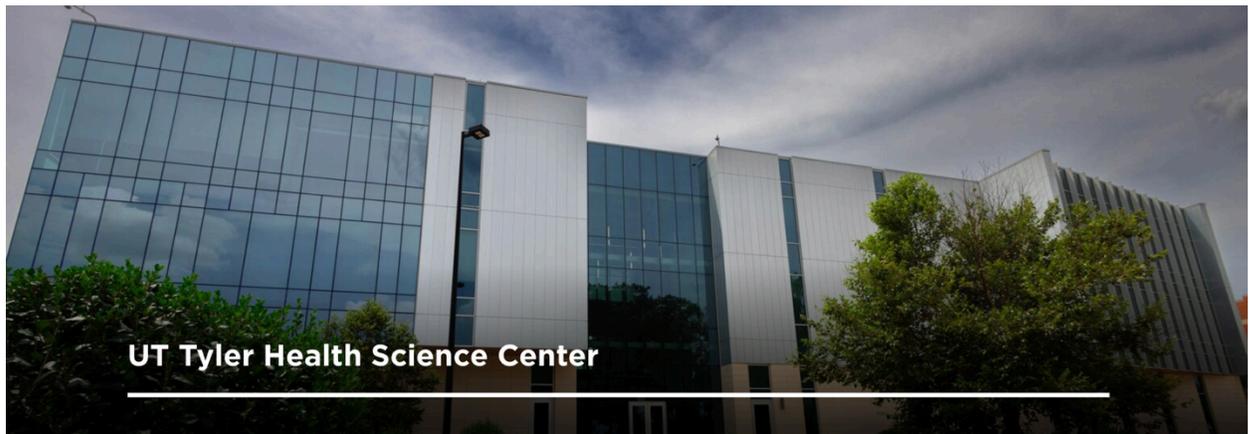
Designated an R2 research institution by the Carnegie Classification of Institutions of Higher Education, UT Tyler supports our surrounding region through innovation intended to uplift communities, spearhead sustainability initiatives, preserve ecosystems, and support entrepreneurship. UT Tyler has the highest Carnegie classification in East Texas.

Providing exceptional patient care, comprehensive education, and innovative research, The University of Texas at Tyler Health Science Center and UT Health East Texas combine to serve as the university medical center for Northeast Texas and beyond.



Research that Improves Lives

At The University of Texas at Tyler, research leads to discovery — uncovering something new that can transform the future. Yet innovation doesn't end there; it serves as a pathway to possibility, one that can improve the quality of life locally, throughout the state, and nationwide. These efforts shape healthcare delivered through UT Health East Texas, our outreach efforts, our region's advancements in sustainability and ecosystem preservation, and our influence on education and industry partnerships.



UT Health Science Center at Tyler

Home to the region's only academic medical center, The University of Texas at Tyler Health Science Center is one of the five campuses of UT Tyler. Two of UT Tyler's four health-related schools have a presence on this campus: the School of Health Professions and the School of Medicine.

About

The University of Texas at Tyler Health Science Center campus is located on the former grounds of the Station Hospital of Camp Fannin, an Infantry Replacement Training Center opened by the Army in 1943. After the state of Texas acquired it, it became a tuberculosis sanatorium. Today, the campus is home to the Camp Fannin Memorial. Later renamed the East Texas Chest Hospital, it operated as an independent hospital until 1977, when it joined the prestigious University of Texas System. Renamed The University of Texas Health Center at Tyler and later UT Health Science Center at Tyler, it aimed to advance patient care and community health, medical and health education, and biomedical and clinical research. Over the years, the Health Science Center added a six-story hospital tower (1980), launched its first

medical residency program (1985), and constructed the Center for Biomedical Research (1987). In 2008, the University of Texas Health Center at Tyler changed its name to the University of Texas Health Science Center at Tyler to better reflect its overarching mission and expanded facilities. The \$67-million addition boasted a state-of-the-art cancer treatment and prevention center, a breast diagnostic center, surgical specialties, the Watson W. Wise Medical Research Library, and Louise & Joseph Z. Ornelas Academic Amphitheater. Its academic offerings also grew with the establishment of the Master of Science in Biotechnology, the Master of Public Health, and the Master of Healthcare Administration programs. After the merger with UT Tyler in 2021, it became The University of Texas at Tyler Health Science Center.



Clinical Research



Biomedical Research



Microbiology



Air and Environmental Quality



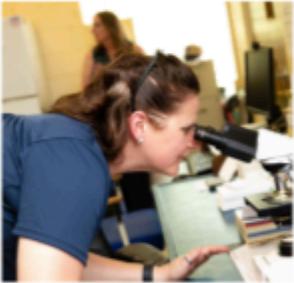
Engineering



Business and Economic Research



Lung Health



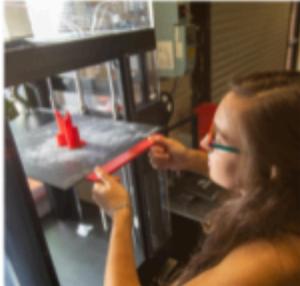
Public Health



Safety and Industry Prevention



Social Sciences



Data Science

Center for Biomedical Research

With nationally recognized researchers and cutting-edge equipment, the Center for Biomedical Research focuses on a range of scientific areas, including lung injury and repair, infectious lung diseases, innate immunity, cell motility, and cancer research. The center provides an engaging learning environment where students pursuing a Master of Science in Biotechnology actively contribute to groundbreaking research as part of their academic journey.

The UT Tyler Health Science Center facility offers an array of crucial medical and healthcare education resources, fostering an environment dedicated to excellence in education. From cutting-edge simulation labs to dedicated research spaces, every aspect of the UT Tyler Health Science Center is designed to enhance the educational experience. This dynamic campus is not just a hub for learning; it's a catalyst for progress in healthcare education and a testament to UT Tyler's commitment to shaping the future of healthcare in the East Texas region.



The Public Health Lab of East Texas

The Public Health Laboratory of East Texas (PHLET), founded in 2004, is one of 120 Laboratory Response Network (LRN) reference laboratories strategically located in the United States. LRN reference labs like PHLET can perform tests to detect and confirm the presence of a threat agent or emerging pathogen. These labs ensure a timely local response in the event of a threat incident or public health emergency. Rather than relying on confirmation from CDC labs, many reference labs can provide conclusive results. This allows local authorities to respond quickly to emergencies. PHLET provides testing for agents of bioterrorism and emerging pathogens to public health partners, clinical laboratories, and law enforcement agencies serving Texas Health Service Regions 4/5N, covering 35 counties in East Texas.

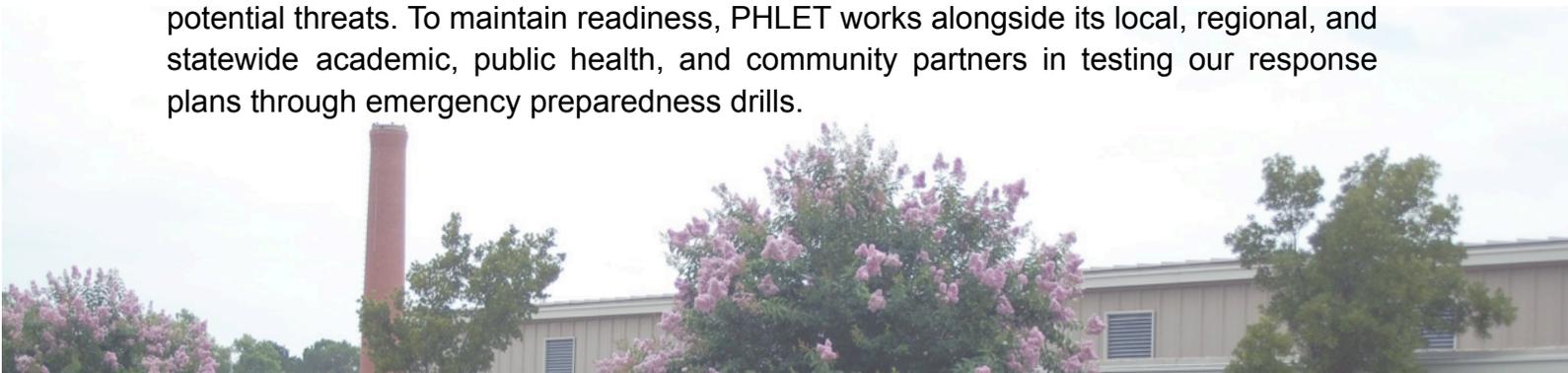
Our Mission: To provide a rapid laboratory response to emerging biological threats to inform critical decisions about public health and safety. Below is a list of our current projects:

Laboratory Response Network and Biothreat: Our laboratory has the capability to rapidly identify suspicious threats such as letters laced with anthrax or ricin toxin. PHLET also tests patient samples from hospitals and clinics for high-risk agents such as anthrax and plague.

Respiratory Illness: As an LRN Lab, we participate in the Texas Influenza Surveillance Network. By partnering with clinics and providers, our lab tests a minimum of 200 clinical samples to observe what strains are causing illness in our region.

Wastewater: PHLET and NET Health work alongside community wastewater treatment plants to obtain samples throughout our region and share information internally to help prepare for increases in respiratory diseases like SARS-CoV-2 and influenza. We have eight wastewater sites in the NET Health 7-county region. We are currently expanding our program with more sites and expanding the ability to share information with our public health partners to enhance our response capabilities to disease increases. This allows us to better prepare our communities.

Community Outreach and Emergency Preparedness: PHLET works closely with the FBI, CDC, DSHS, and local public health officials, as well as our laboratories and first responders, to provide training opportunities and spread information about upcoming potential threats. To maintain readiness, PHLET works alongside its local, regional, and statewide academic, public health, and community partners in testing our response plans through emergency preparedness drills.



UT Tyler School of Medicine

The University of Texas at Tyler School of Medicine is the first medical school in East Texas and the seventh in the University of Texas System. Its mission is to train future healthcare professionals to embrace responsibility for the unique needs of rural and hard-to-reach communities and populations, particularly those in East Texas.

The school offers a robust Graduate Medical Education program, with 22 residency and fellowship training programs, enabling graduates to gain specialized skills in areas such as family medicine, internal medicine, neurology, psychiatry, surgery, and anesthesia. Additionally, UT Tyler's Master of Biotechnology program provides students with an interdisciplinary curriculum that emphasizes medical research and biotechnology innovation, preparing them for careers in medical research, diagnostics, and therapeutic development. This fall, the school welcomed its first cohort of PhD students for its Integrated Biomedical Sciences program. In collaboration with the Longview University Center campus, the school also announced its intent to launch the first Physician Assistant master's program in East Texas.

Construction is currently underway on a five-story, 248,000-square-foot Medical Education Building (MEB) in Tyler's Midtown District. Connected to UT Health Tyler by a skybridge, the MEB will support interdisciplinary education for medical students and resident training. It will also aid in expanding a medical education program across the UT Health East Texas Health System. The building is scheduled for completion in 2025.

Emphasizing a community-centered approach, the UT Tyler School of Medicine combines advanced research, hands-on learning, and partnerships with regional healthcare providers to cultivate a new generation of physicians prepared to improve healthcare outcomes and enhance the quality of life in East Texas. Visit uttyler.edu/medicine to learn more.



Welcome Guest Lecturers

Day 1, Oct. 30, 2025 - Thursday

The Richard J. Wallace, MD Distinguished Mycobacteria Lecture

Michael Shiloh, MD, PhD
UT Southwestern Medical Center
Professor with Tenure

James P. Luby Professorship in Infectious Disease
“Mechanistic analysis of the mycobacterial transmission cycle”

Location: UT Tyler UC, R.M. Theater

Dr. Michael Shiloh investigates how *Mycobacterium tuberculosis* (Mtb) interacts with the innate, mucosal, and neuroimmune systems to cause disease and promote transmission. Dr. Shiloh’s interest in biomedical research began as an undergraduate studying chemistry and enzymology at Penn State University. He went on to earn his M.D. and Ph.D. in Immunology through the Tri-Institutional MD-PhD Program in New York City, graduating from Weill Cornell Medical College. He completed residency and fellowship training in Internal Medicine and Infectious Diseases at the University of California, San Francisco, where his passion for immunology and microbiology converged into a focused interest in tuberculosis pathogenesis—a commitment he has continued at UT Southwestern.



His lab aims to elucidate the full infectious cycle of *M. tuberculosis*, from transmission to intracellular survival. Key discoveries include: identifying mucosal microfold (M) cells as a novel entry portal for Mtb; characterizing host-pathogen interactions that mediate M cell invasion; defining the role of host proteins cGAS and SMURF1 in macrophage-mediated autophagy; and revealing how Mtb lipids activate airway nociceptive neurons to trigger cough. These studies provide mechanistic insights into how Mtb spreads, establishes infection, and evades immune defenses.

In addition to leading an active research program, Dr. Shiloh is a consulting infectious diseases physician at UT Southwestern’s Clements University Hospital and Dallas County’s Parkland Hospital.

Day 2, Oct. 31, 2025 - Friday

ASM Distinguished Lecturer

Davida Smyth, PhD
Professor of Biology
Texas A&M University-San Antonio, Texas
“Doing more with less”
Location: UT Tyler UC Ballroom

Davida S. Smyth, Ph.D., is a full professor of biology at Texas A&M University-San Antonio, Texas. She received her Ph.D. in microbiology from the University of Dublin, Trinity College, Ireland and completed postdoctoral fellowships at New York Medical College, the University of Mississippi Medical Center and New York University. She served as associate professor of Natural Sciences at Eugene Lang College of Liberal Arts at The New School, associate professor and Chairperson of the Department of Natural Sciences at Mercy College (now Mercy University) and assistant professor of biology at New York City College of Technology (NYCCT).



The Smyth lab studies viral and bacterial aerosol transmission, the use of wastewater epidemiology and surveillance for pathogens, such as SARS-CoV-2, and the role of the built environment and anthropogenic activity in driving antibiotic resistance, a major global health threat. She is also working to improve civic and scientific literacy in biology by using ePortfolios and integrating authentic research into the curriculum.

Smyth is a Senior Science Education for New Civic Engagements and Responsibilities (SENCER) Leadership fellow, as well as a Partnership for Undergraduate Life Sciences Education (PULSE) fellow and ambassador. She is Deputy Director of the National Center for Science and Civic Engagement. She has received several teaching and mentoring awards and serves on several national grants working to reform STEM education through classroom-based undergraduate research experiences (CUREs) and civic engagement.

Fall 2025 Texas Branch ASM Meeting Agenda

Day 1, Oct. 30, 2025 - Thursday

Location: University Center (UC), UT Tyler Main Campus
(For all events except Thursday Tours)

1200-1800 Registration Opens; Location = UT Tyler main campus
Location UC, Rodney Mabary Theater's Foyer

1430-1600 Tour of PHLET & SMILE North Campus (transportation on own)

- *For registered participants only*
- Tours require attendees to pick up registration material and name tags first at UT Tyler
- These tours will switch off between each other (45-minute tours at each)
- Slots are limited to 40 attendees
- Due to limited slots, pre-registration is suggested

1. Public Health Laboratories of East Texas (PHLET)
Report to Building 448 on HSC campus
(Next to the credit union and across from BMR) (Contact: Dr. Michelle Crum)
2. Immersive Learning Experience (SMILE) Center
(Contact: Wesley Lockhart)

1700-1750 Networking social - appetizers/drinks
Location: UC, Ballroom #3300E

1750-1800 Opening
Meeting Chair and Host: Ali Azghani, PhD
President, Texas Branch ASM: Natasha Kirienko, PhD, Rice University
Location: UC, Ballroom 3300A

1800-1900 Dinner
Location: UC, Ballroom 3300 A & E

1900-2000

The Richard J. Wallace, MD

Distinguished Mycobacteria Lecture

Michael Shiloh, MD, PhD, UTSWMC

Associate Professor, James P. Luby

Professorship in Infectious Disease

“Mechanistic analysis of the mycobacterial transmission cycle”

Location: UC, Rodney Mabary Theater

2000-2100

Business Meeting – In-person and Virtual

Open to all Members

Location: UC, Ballroom 3300A

Virtual option:

<https://riceuniversity.zoom.us/j/96544625785?pwd=PABTvsbgPaYgjOuuXiLxxpg6fCbVe3.1>

Day 2, Oct. 31, 2025 - Friday

Location: UT Tyler Main Campus UC, Ballroom

0700-1100 Registration (UC, RM Theater Foyer)

0700-0800 Continental Breakfast (UC, Ballroom # 3300E)

0800-0930 Undergraduate, Graduate Parallel Sessions

Medical Microbiology: Host-pathogen Interactions

LOCATION: UC, Ballroom # 3300A

Session Leads: Amy Tvinnereim, PhD (UTHSCT);

Buka Samten, MD (UTHSCT) Co-Chair

		Presenter	Institution	Title of abstract
0800-0815	Graduate	Kathryn Seely	The University of Texas at Dallas	Estrogen Signaling Contributes to Group B Streptococcal Interaction of the Blood Brain Barrier
0815-0830	Graduate	Muneer Yaqub	The University of Texas at Dallas	Evolutionary Landscape of Colistin Resistance in <i>Acinetobacter baumannii</i>
0830-0845	Graduate	Nina Tang	Baylor College of Medicine	Paradoxical effects of <i>Ascaris</i> -induced Pyloric Metaplasia: Reducing <i>Ascaris</i> Reinfection Burden but Creating <i>Helicobacter pylori</i> Opportunity
0845-0900	Graduate	Waris Muhammad Khuwaja	University of Texas at Dallas	Mast Cell-specific G Protein-coupled Receptor Regulates Bladder Immunity During Urinary Tract Infections
0900-0915	Graduate	Bhavani Balasundarasekar	The University of Texas at Dallas	In Vivo Characterization of Microbe Host Interaction Between <i>Staphylococcus aureus</i> and the Mammalian Defensin System
0915-0930	Graduate	Feranmi Obe	University of Texas at Tyler	Recovery of Paracellular Barrier in Pulmonary Epithelial Monolayers Exposed to Pneumolysin from <i>Streptococcus pneumoniae</i>

General Microbiology: Environmental

LOCATION: UC, Rodney Mabary Theater

Session Leads: Riqing Yu, PhD (UTT) Chair; Amanda Morris, PhD (UTHSCT) Co-Chair

		Presenter	Institution	Title of abstract
0800-0815	Undergraduate	Yining Liu	University of Texas at Dallas	Characterizing the Expression and Functions of MRGPR Receptors in Human Neutrophil Cell Line HL-60
0815-0830	Undergraduate	Spandan Mukherjee	University of Texas at Dallas	Phthalate-based Plasticizer Pollutants Modulate Kaposi's Sarcoma-associated Herpesvirus Infection
0830-0845	Undergraduate	Ahmad Sulaiman	University of North Texas	Comparative Systems Analysis of Wild-Type and Lysogens of <i>Streptomyces griseus</i> : Regulation and Reprogramming of Primary and Secondary Metabolism
0845-0900	Graduate	Haden Do	UTHealth Houston	Beyond the Living: Dead Cells Promote Survival of Live Cells Under Antibiotic Attack
0900-0915	Graduate	Chito Ofodum	Sam Houston State University	Microbiome Composition and Community Structure in Soil Sediments of Lake Raven and Lake Conroe

0930-1000

Coffee Break & Exhibits visit (UC, Ballroom 3300S)

1000-1130

Undergraduate, Graduate

Parallel Sessions**Medical Microbiology: Viruses, Public Health, Medical Microbiology****LOCATION: UC, Ballroom 3300A**

Session Leads: Michelle Crum, PhD (PHLET) Chair; Guohua Yi, PhD (UTHSCT)

Co-Chair

		Presenter	Institution	Title of abstract
1000-1015	Graduate	Andrej Momiroski	Texas A&M University, College Station	Understanding infection initiation in <i>Burkholderia cenocepacia</i> phage BcepLL02, a Lessievirus encoding multiple tail fibers and <i>gp64</i> , a novel host range determinant
1015-1030	Graduate	Mounika Duggineni	The University of Texas Health Science Center at Tyler	Evaluating Bacteriophage Therapy Against <i>Klebsiella pneumoniae</i> in Innate Immune Cells
1030-1045	Graduate	Maxwell Ross	Graduate School of Biomedical Sciences at Baylor College of Medicine, Houston	Developing an Immunogenic and Cross-Protective Flavivirus mRNA Vaccine
1045-1100	Graduate	Narendra Kumar Gonepudi	University of Texas at Tyler	Engineering HIV-1 Envelope (Env) Glycoprotein Using Genetic Codon Expansion to Gain Insights into Structural Dynamics of Env
1100-1115	Graduate	Kiyah Costin	University of Texas Medical Branch, Galveston	Crimean-Congo Hemorrhagic Fever Virus Infection in Human and Animal Cell Lines: A Pathway to Understanding Species-Specific Pathogenesis
1115-1130	Graduate	Megan Burch	University of Texas Medical Branch, Galveston	Cellular Targets and Pathogenesis of Bourbon virus at the Tick-Host-Virus Interface

General Microbiology: Ecology/Evolution

Location: UC, Rodney Mabary Theater

Session Leads: Joshua Banta, PhD (UTT) Chair; Wei-Chin Ho, PhD (UTT) Co-Chair

		Presenter	Institution	Title of abstract
1000-1015	Graduate	Kingsley Amoateng	University of Texas at Tyler	Experimental Evolution of <i>Escherichia coli</i> in Acidic Environments
1015-1030	Graduate	Tuhina Maity	University of Texas at Dallas	Bicarbonate Impairs the Evolution of Azithromycin Resistance in <i>Pseudomonas aeruginosa</i>
1030-1045	Graduate	James Campbell	University of Texas at Tyler	From Anemone to Coral: Establishing <i>Nematostella vectensis</i> as a Translational Model for Coral Disease Research
1045-1100	Fellow/ Early Career	Liaqat Ali	University of Texas at Tyler	Implementing Recombineering Coupled with CRISPR/Cas9 Counterselection to Study <i>Staphylococcus aureus</i> Mutation Driving Antibiotic Resistance
1100-1115	Research Technician /Staff	Jenea Travier	University of Texas at Tyler	Uncovering Environmental Nontuberculous Mycobacteria of Respiratory Significance in Northeast Texas

1130-1230

Lunch and poster set up
Judges meeting to review oral presentation awardees

1230-1330

Moderators:

Poster Session A (Odd poster numbers; UC, 3rd Floor Hall)
Pierre Neuenschwander, PhD (UTHSCT) Chair;
Co-Chair Raulie Raulerson, PhD Co-Chair (UTHSCT)

1330-1430

Moderators:

Poster Session B (Even poster number; UC, 3rd Floor Hall)
Stephanie Daugherty, PhD (UTHSCT) Chair;
Chris Holmquist, PhD (UTHSCT) Co-Chair

1430-1500

Afternoon refreshments
Judge meeting to review poster awardees

1500-1700

Fellow and Early Career Faculty

Parallel Sessions

Medical Microbiology: Disease Pathogenesis and Bioinformatics

Location: UC, Ballroom 3300A

Session Leads: Shashi Kant, PhD (UTHSCT) Chair; Lianghao Ding, PhD (UTHSCT)
Co-Chair

		Presenter	Institution	Title of abstract
1500-1520	Early Career	Saurabh Srivastava	Hilton, USA	From Petabytes to Privacy: Enterprise Cloud Security for Biomed
1520-1540	Early Career	Jennifer Walker	University of Texas Health Science Center at Houston	Long term colonization selects for genomic adaptations that impact pathogenic potential
1540-1600	Early Career	Prithvi Raj	UTSW, Dallas, Texas	Knee Joint-fluid Multiomics in Suspected Pediatric Septic Arthritis Rapidly Identifies Cases with Autoimmune Component
1600-1620	Early Career	Olena Shtanko	Texas Biomedical Research Institute, San Antonio	Ebola virus transforms migratory properties of macrophages to promote virus replication and spread through tunneling nanotubes
1620-1640	Fellow	Donghoon Alex Kang	Houston Methodist Research Institute, Houston	#35; Genomic and Phenotypic Surveillance of Pseudomonas aeruginosa Cystic Fibrosis Isolates for Cefiderocol Nonsusceptibility and Hypermutability
1640-1700	Fellow	Rajesh Mani (Andy Omoje)	University of Texas Health Science Center at Tyler	Sirtuin Modulation Alters HIV Replication in Primary Human Immune Cells and Humanized Mice

General Microbiology: Animal model, Pharmacology

Location: UC, RM Theater #2114

Session Leads: Galina Florova, PhD (UTHSCT) Chair; May Abdelaziz, PhD (UTT) Co-Chair

		Presenter	Institution	Title of abstract
1500-1520	Fellow	Jincy Jacob	University of Texas at Tyler, School of Medicine	<i>Streptococcus pneumoniae</i> –Induced Rabbit Model of Empyema Reveals the Contribution of TREM-1 in Pleural Inflammation
1520-1540	Fellow	Wang Xu	University of Texas at Tyler Health Science Center	Protocol for click labeling of HIV-1 envelope on amber-free virions prepared using genetic code expansion
1540-1600	Fellow	Sunil Christudas	University of Texas at Tyler, School of Medicine	Mechanisms Underlying PAI-1 Targeted Fibrinolytic Therapy in a Rabbit Model of <i>Streptococcus pneumoniae</i> –Induced Empyema
1600-1620	Fellow	Maliha Batool	The University of Texas at Dallas	Investigating the Role of Defensins in Urogenital Epithelial Defense Against Pathogens
1620-1640	Research Technician /Staff	Christian Jordan De Vera	UT Tyler Health Science Center	Understanding the Role of Infection in Hemothorax Pathology and Treatment: Presentation of a Noninfectious vs Infectious Rabbit Model of Retained Hemothorax
1640-1700	Early Career	Madhan R Tirumalai	University of Houston	Genome Analysis and Dormancy of <i>Tersicoccus phoenicis</i> , a Spacecraft Cleanroom Isolate

1700-1730 Pre-dinner break / Judge meeting to finalize awardees

1730-1830 Dinner (UC, Ballroom 3300 A&E)

1830-1930 **ASM Distinguished Lecturer**
 Davida Smyth, PhD
 Professor of Biology
 Texas A&M University, San Antonio, TX
“Doing more with less”
 Location: UC, RM Theater #2114

1930-2000 Award Ceremony (UC, RM Theater #2114)

2000-2200 Networking, Halloween celebration over wine and beer (UC, Ballroom 3300 A&E; OPTIONAL Halloween attire)

Day 3, Nov. 1, 2025 - Saturday

Location: UT Tyler Main Campus UC, Ballroom

0730-0830 Breakfast (UC Ballroom 3300E)

0830-12:30 Thematic Microbiology Sessions

Microbiology Research Models

Location: UC, Ballroom 3300A

Session Lead: Tanya Brown, PhD (UTT); Jon Seal PhD (UTT)

		Presenter	Institution	Title of abstract
0830-0845	Research Technician /Staff	Chelsea Raulerson	UT Tyler School of Medicine	Documentation of environmentally acquired <i>M. intracellulare</i> subsp. <i>chimaera</i> pulmonary disease soon after bronchiectasis onset: a case study
0845-0900	Early Career	Shiva Keshava Goddam	University of Texas Health Science Center at Tyler	Modeling Pleural Fibrosis in Mice: Mechanistic Insights and Translational Potential
0900-0915	Research Technician /Staff	V. Jenna Rogers	UT Tyler School of Medicine	Loss of cell envelope-associated rough core genes of respiratory <i>Mycobacterium abscessus</i> isolates from people with cystic fibrosis compared to environmental isolates
0915-0930	Faculty	Andrey Komissarov	UT Tyler School of Medicine	Validation of Plasminogen Activator Inhibitor 1 (PAI-1) as a Molecular Target in Three Rabbit Models of Pleural Injury

Microbiology Education

Location: UC, Ballroom 3300A

Session Leads: Davida Smyth, PhD (ASM Distinguished Speaker); Greg Frederick, PhD

	Presenter	Rank/Title:	Institution	Title of presentation:
0930-0945	Todd Primm, PhD & Stanlee Brandt	Professor and Past TXASM President & MA Student	Sam Houston State University	Active Learning for Teaching Microbial Metabolism
0945-1000	James Masuoka, PhD	Professor and TXASM President-Elect	Midwestern State University	Assessing aseptic technique as part of a laboratory skills proficiency task book
1000-1030	Panel discussion Moderator: Gregory Frederick, PhD (TX ASM Immediate Past President) and Davida Smyth, PhD (ASM Distinguished Speaker) Additional Panelist: Bibiana Gonzalez -Ramirez, Laboratory Supervisor of Molecular Biology, Mycobacteria/Nocardia Laboratory, University of Texas Health Science Center at Tyler			

Microbiology Careers and Training

Location: UC, Ballroom 3300A

Session Lead: Barbara Brown-Elliott MS, MT (ASCP) SM, Chair; Alex Kang, PhD,
Co-Chair

		Presenter	Institution	Title of presentation:
1030-1050	Postdoctoral Fellow ASM Young Ambassador to Texas	Alex Kang, PhD,	Houston Methodist Research Institute	"Outreach and Leadership Opportunities for Early Career Microbiologists"
1050-1110	Associate Professor of BioSciences ASM Texas Branch President	Natasha Kirienko, PhD	Rice University	"Funding Opportunities for Trainees and Tips & Tools for Success"
1110-1130	Regents' Professor of Biology	Bob McLean, PhD	Texas State University	"A young boy's journey from an interest in nature and rockets to doing spaceflight experiments"
1130-1150	Professor of Cellular and Molecular Biology and Medicine Associate Director, Mycobacteria/Nocardia Laboratory	Barbara Brown-Elliott, MS, MT (ASCP) SM, FAAM	University of Texas Health Science Center at Tyler	"My journey in Microbiology: Upward Mobility from Lab Bench to Beyond"
1150-1215	Panel discussion Moderator: Barbara Brown-Elliott MS, MT (ASCP) SM, FAAM Additional Panelist: Bibiana Gonzalez -Ramirez, Laboratory Supervisor of Molecular Biology, Mycobacteria/Nocardia Laboratory, University of Texas Health Science Center at Tyler			

1215-1230

Acknowledgements and Closure of the meeting (UC, Ballroom 3300A)

Thank you all for attending!

Adjourn!

Save the Date

Spring 2026 Texas ASM Branch Meeting

Mount Lebanon, March 26-28, 2026

1701 Texas Plume Rd. Cedar Hill, TX 75104

Current Texas Branch ASM Officers

President

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Houston, TX 77251-1892

Phone: 713-348-2581

kirienko@rice.edu



Dr. Kirienko is an Associate Professor at the BioSciences Department at Rice University, where she started her independent lab in 2015. She is the President of the Texas Branch of the ASM and the Chair of the Antimicrobial Resistance Consortium of the Gulf Coast Consortia. Dr. Kirienko began studying host-pathogen interactions during her postdoctoral work at Massachusetts General Hospital/Harvard Medical School under Fred Ausubel and Gary Ruvkun, where she used the model nematode *Caenorhabditis elegans* to understand the virulence mechanisms of *Pseudomonas aeruginosa* and to identify novel drug treatments. She has continued these projects in her own lab, augmenting them with additional projects on the characterization of acute virulence factors produced by *P. aeruginosa* (e.g., siderophores and rhamnolipids), and their impact on mammalian cell survival. Several years ago, she also began working on the molecular mechanisms underlying the dominance of selected *P. aeruginosa* sequence types and the role of pyocins (phage-tail-like protein complexes produced by *P. aeruginosa*) in driving this intraspecies competition. She also explores the potential of pyocins in killing multidrug-resistant *P. aeruginosa*. During her time at Rice, she has trained 13 graduate and over 50 undergraduate students in her lab.

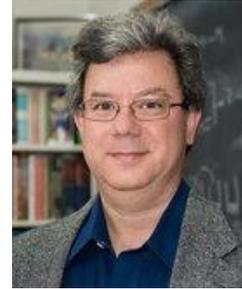
President-Elect

James Masuoka, PhD

McCoy College of Science, Mathematics and Engineering

Midwestern State University

james.masuoka@msutexas.edu



Dr. James Masuoka is a Professor of Biology at Midwestern State University. He earned his Bachelor of Science degree in Microbiology from Montana State University. He completed his PhD in Biology with Paul Saltman at the University of California, San Diego, where he characterized the binding of trace metals to serum albumin. He completed post-doctoral research on glycosylation of *Candida albicans* cell wall proteins in Kevin Hazen's lab at the University of Virginia Medical Center before joining the faculty at Midwestern State in 2007. Dr. Masuoka's current research interests extend his post-doctoral work on *Candida albicans* to include the effect of human signaling molecules, such as serotonin, on *C. albicans* cell surface properties. Since joining the faculty at Midwestern State, he has broadened his research efforts with undergraduate and graduate students to include bacteria-fungal interactions, microbial symbionts of native Texas plants, and the distribution of antibiotic resistance genes and other virulence factors in bacteria isolated from local and migratory waterfowl. Dr. Masuoka has been a member of ASM since becoming a student member in 1984 and has been an active member of both the Virginia and Texas branches.

Immediate Past President

Gregory Frederick, PhD

Department of Molecular Cell Biology
American University of the Caribbean School of Medicine

Sint Maarten

Phone: 254-307-1278

GFrederick@aucmed.edu

www.AUCMed.edu



Dr. Frederick's career bridges groundbreaking science and inspired teaching across three continents. His career is a story of science in motion—spanning molecular breakthroughs, global classrooms, and visionary leadership. After earning his Ph.D. at the University of Kansas Medical Center, where he pioneered tools for studying eukaryotic gene regulation, he advanced to the University of Texas Southwestern Medical Center (UTSW). There, his research on DNA repair illuminated the ERCC2/XPD gene, linking it to rare disorders such as xeroderma pigmentosum and Cockayne syndrome. At the same time, he trained the next generation of physicians and scientists in cutting-edge molecular biology.

His passion for shaping students' futures came to the forefront at LeTourneau University, where he served as Chair of the Department of Biology and Kinesiology. In this role, he guided faculty, built programs, and mentored students who would go on to medical school—including those at the American University of the Caribbean School of Medicine (AUC).

Today, Dr. Frederick brings this blend of research depth and educational leadership to AUC, where he continues to inspire future physicians and currently serves as the Immediate Past President of the Texas Branch of the American Society for Microbiology. His career reflects a rare balance of scientific rigor, global perspective, and a teacher's heart—qualities that continue to ripple outward through the students and colleagues he has trained.

Secretary**William Cody, PhD**

Department of Biology

University of Dallas

Irving, TX 75062

Phone: 972-721-5192

wcody@udallas.edu

Dr. William L. Cody is an Associate Professor of Biology at the University of Dallas. He earned a Bachelor of Science degree in Biology from Xavier University of Louisiana and a Ph.D. in Microbiology as a member of the Schurr Lab at the University of Colorado Anschutz Medical Campus, where he investigated virulence mechanisms of *Pseudomonas aeruginosa*. He subsequently completed a postdoctoral research fellowship at the University of Texas Southwestern Medical Center, where he studied *Campylobacter jejuni*. Dr. Cody joined the faculty at the University of Dallas in 2011. His research lab focuses on two-component signal transduction systems and alternative sigma factors in *P. aeruginosa* involved in the transcriptional activation of virulence factors during infection of human hosts, as well as the utilization of hydrocarbons in the bioremediation of contaminated environments. Dr. Cody served as Chair of the Biology Department at UD for six years. He has played a leading role in expanding the university's academic offerings, including an undergraduate summer research program at the Università di Roma Tor Vergata and a 4+1 Master's program in Biomedical Engineering in cooperation with the University of Texas at Arlington. Dr. Cody currently serves as the inaugural Graduate Director of the University's Medical Humanities program.

Treasurer

Patricia Baynham, PhD

Department of Biology

St. Edward's University

Austin, TX 78704

Phone: 512-233-1675

patricib@stedwards.edu



Trish Baynham is a Professor of Biological Sciences at St. Edward's University in Austin, TX. She obtained her Ph.D. in Microbiology and Immunology from Wake Forest School of Medicine, Winston-Salem, NC. She served as a public health associate at the US Centers for Disease Control stationed in Dallas, TX. Her teaching experience includes courses in Epidemiology, Microbiology, History and Philosophy of Science, and Culminating Experience. She has previously served as department chair and interim dean and is as Lucian Chair of Science and Director of the Health Systems and Administration program. She is a National Academies Education Fellow in the Sciences and currently the Project Director for the USDA-sponsored NextGen E3 grant. Her research interests include seeking solutions for antimicrobial resistance and science pedagogy.

Archivist

Dustin Edwards, PhD

Professor and Interim Department Head,
Department of Biological Sciences
Tarleton State University
Stephenville, TX 76402
dcedwards@tarleton.edu



Dr. Dustin Edwards is a Professor of Biological Sciences at Tarleton State University, where he advances molecular virology and infectious disease ecology through research and undergraduate mentorship. He earned his PhD in Biomedical Sciences from Baylor College of Medicine and completed a postdoctoral fellowship at the National Cancer Institute (NIH), elucidating the mechanisms of human T-cell leukemia virus type 1 (HTLV-1) persistence and the role of its accessory proteins in viral pathogenesis. At Tarleton, his lab conducts wildlife pathogen surveillance, including avian retrovirus detection in Amazonian birds and molecular epidemiology of wild turkey viruses across the U.S. Dr. Edwards directs the Howard Hughes Medical Institute SEA-PHAGES and SEA-GENES programs at Tarleton, guiding students in bacteriophage discovery, genome annotation, and bioinformatics. He emphasizes course-based research to prepare undergraduates for STEM careers. An active ASM member, Dr. Edwards currently serves as Archivist for the Texas Branch. His collaborative approach bridges basic science with public health applications, promoting access to research opportunities and advancing microbial discovery in underserved regions.

Councilor

Heidi B. Kaplan, PhD

Department of Microbiology and Molecular Genetics
McGovern Medical School
University of Texas Health Science Center at Houston
Houston, TX 77030
Phone: 713-500-5448
Heidi.B.Kaplan@uth.tmc.edu



Heidi B. Kaplan, Ph.D., is associate professor of Microbiology and Molecular Genetics at McGovern Medical School, UTHealth, Houston. She received her Ph.D. in Microbiology at Cornell with E. Peter Greenberg, studying *Vibrio fischeri* autoinduction, which became known as quorum signaling. She completed her postdoctoral fellowship at Stanford University with Dale Kaiser, studying *Myxococcus xanthus* development. Dr. Kaplan's research interests focus on the complex behavioral responses of bacterial communities to their changing environment. Her current research examines bacteriophage therapy for the treatment of clinically relevant biofilm infections. Dr. Kaplan served as Chair of ASM's Council on Microbial Sciences (COMS) from 2024 to 2025. She continues to represent the Texas ASM Branch as Councilor. In addition, she is an advisor to the very active Texas Medical Center ASM Graduate Student and Postdoc Chapter. She has served the national ASM in many ways, including as Chair of the ASM Distinguished Lecturer Committee from 2015 to 2021 and as chair of the ASM Conferences on Cell-Cell Communication in Bacteria and Prokaryotic Development.

Fall 2025 Branch Meeting Organizing Committee

University of Texas at Tyler (UTT)
University of Texas Health Science Center at Tyler (UTHSCT)

Chair

Ali Azghani, PhD (UTT)

Professor of Biology
Adjunct professor, S.O. Medicine
Fulbright Scholar
National Academies Education Fellow



Co-Chair

Jennifer R. Honda, PhD, ATSF (UTHSCT)

Associate Professor
John S. Chapman Endowed Professorship in Microbiology
Department of Cellular and Molecular Biology
School of Medicine
Inaugural Director, Center for NTM Innovation



Jennifer R. Honda, PhD, was born and raised in Honolulu, Hawai'i. She received her B.S. from Colorado State University in Biology and Zoology and M.S. in Microbiology from the University of Hawai'i. From the University of Colorado Anschutz Medical Campus, she received her Ph.D. in Microbiology with postdoctoral fellowship training in Infectious Disease and Pulmonary Science. Dr. Honda started and grew her NTM research program as an Instructor and Assistant Professor in the Department of Immunology and Genomic Medicine at National Jewish Health in Denver, Colorado. Today, Dr. Honda continues to expand her basic science, translational mycobacteriology research program as an Associate Professor for the Department of Cellular and Molecular Biology and the School of Medicine at the University of Texas Health Science Center at Tyler, where she is also the Inaugural Director of a new NTM Center of Excellence. Her research program actively studies the 1) environmental, 2) host, and 3) microbial factors that contribute to NTM pulmonary disease emergence globally. The Honda Lab consistently seeks to learn more about the environmental drivers of NTM, routinely cultures NTM from environmental and clinical samples, and utilizes these recovered isolates to explore the intra- and inter-NTM species differences that contribute to pathogenicity and host evasion. Active in the American Thoracic Society (ATS) Pulmonary Infections and Tuberculosis (PI-TB) Assembly since 2014, she is the recipient of an ATS Foundation award in Pulmonary Medicine, named PI-TB's Rising Star in 2019 and Top Junior Faculty in 2021, and became an ATS Fellow in 2022. The European Respiratory Society distinguished Dr. Honda in 2020 as an Innovator in NTM Science and Medicine.

Meet our fabulous team of UTT and UTHSCT Organizers and Chairs who reviewed abstracts and assisted with program development! Thank you!

Barbara A. Brown-Elliott, MS, MT (ASCP) SM, FAAM (UTHSCT)

Professor and Associate Director, Mycobacteria/Nocardia Laboratory
Department of Cellular and Molecular Biology and Medicine
UTTyler School of Medicine



Barbara A. Brown-Elliott has worked in the Mycobacteria/Nocardia Clinical Reference Laboratory at the UTHSCT since 1988. She has been a member of the American Society for Microbiology since 1978. Barbara currently serves as Associate Director and Professor in the College of American Pathologists (CAP) accredited UTHSCT Mycobacteria/Nocardia Clinical Reference Laboratory. She is also a member/advisor for the CLSI (Clinical and Laboratory Standards Institute, formerly NCCLS, National Committee for Clinical Laboratory Standards) Subcommittee on Antimycobacterial Susceptibility Testing, a past member of the Editorial Board of Clinical Microbiology Reviews, and a member of the CLSI Subcommittee on Laboratory Diagnosis of Mycobacterial Infections. She is the author of more than 350 scientific articles, abstracts, and chapters, and has presented more than 100 research abstracts/posters at international meetings. She is a frequently invited speaker at regional, national, and international meetings and was a previous delegate to the International Conference on Macrolides, Azalides, Streptogramins, and Ketolides in Spain and the Western Pacific Congress of Chemotherapy and Infectious Disease in Hong Kong, China. She was also appointed to the Centers for Disease Control Laboratory Proficiency Testing Committee and to the American Thoracic Society (ATS) Committee for the revision of the guidelines for the diagnosis of nontuberculous mycobacteria, and has been a frequent speaker at ASM, ASCP, and the National Teleconference Network. She is the 2009 recipient of the Gardner Middlebrook Award for significant contributions to mycobacteriology, and in 2013, she received the American Society for Microbiology Scherago-Rubin Award for Excellence in Clinical Microbiology. She was an ASM Distinguished Lecturer for 2019-2020 and, in 2024, was voted by the ASM as a Fellow into the American Academy of Microbiology (FAAM).

Amy Tvinnereim, PhD (UTHSCT)

Professor

Department of Cellular and Molecular Biology

Director of the Animal and Biosafety Research Program



Dr. Tvinnereim is an instructor in both the Biotechnology program and the School of Medicine. Dr. Tvinnereim was trained as an Immunologist and Microbiologist at the Medical College of Wisconsin and earned her Ph.D. in 1998. Dr. Tvinnereim came to the University of Texas Health Science Center at Tyler as a postdoctoral fellow in 2002 and joined the faculty in 2007. Dr. Tvinnereim's postdoctoral research focused on host-pathogen interactions in mouse models of *Listeria monocytogenes* and *Chlamydia pneumoniae* infections. Currently, Dr. Tvinnereim is an active instructor and teaches in the Master of Science in Biotechnology Program and the Medical School. In addition, Dr. Tvinnereim helps organize the Summer Extern program and provides a hands-on lab experience in this program and in the Pre-JAMP Camp. As Director of the Animal and Biosafety Research Program, Dr. Tvinnereim is responsible for overseeing the ethical and compliant use of animals in research and teaching, as well as the safe and compliant conduct of research involving biohazardous materials, including recombinant DNA, infectious organisms, and other biological hazards within the university. Dr. Tvinnereim works closely with researchers, veterinarians, biosafety officers, and regulatory agencies to maintain high standards of animal welfare, biosafety, and compliance.

Buka Samten, PhD (UTHSCT)

Associate Professor

Department of Cellular and Molecular Biology



Dr. Buka Samten currently holds the position of Associate Professor of Microbiology and Immunology in the Department of Cellular and Molecular Biology at the University of Texas at Tyler School of Medicine. His research focuses on understanding T cell immune responses against tuberculosis infection, a devastating human disease, using both human primary immune cells and mouse models of tuberculosis infection, with a long-term goal of developing novel diagnostic and therapeutic tools for better tuberculosis control. His previous studies have shown that defects in cellular proteins contribute to the compromised T cell immune responses against tuberculosis infection, and the early secreted antigenic target of 6 kD (ESAT-6), a virulence factor of the tuberculosis pathogen *Mycobacterium tuberculosis*, suppresses Th1 immune responses. His current research is aimed at uncovering the potential roles of histone deacetylases, epigenetic effector proteins, in immune responses against tuberculosis infection and understanding the infection pathology of nontuberculous mycobacteria using mouse models of nontuberculous mycobacteria strains isolated from patients and the environment.

Riqing Yu, PhD (UTT)

Associate Professor
Department of Biology
Center for Environment, Biodiversity and Conservation



Dr. Yu focuses on teaching and research on microbiology, environmental microbiology, and molecular microbial ecology, with previous experience in aquatic ecotoxicology & biogeochemistry. Research interests include Environmental Microbiology: microbial transformation and biogeochemistry of toxic metals (e.g., Hg), biodegradation of allelochemicals and other toxic organic pollutants via molecular biology and in-situ analysis approaches and Microbial Metagenomics and Bioinformatics: gene sequence analysis, phylogenetic and community analysis of microbes in contamination habitats and remediation sites, identification of functioning genes and protein expression in novel microbial strains importantly in remediation and biofuel studies.

Amanda Morris, PhD (UTHSCT)

Assistant Professor
Department of Cellular and Molecular Biology



Dr. Amanda Morris is an Assistant Professor in the Department of Cellular and Molecular Biology at the University of Texas at Tyler Health Science Center. Her research focuses on bacterial biofilms and polymicrobial interactions in chronic respiratory infections, with emphasis on nontuberculous mycobacteria (NTM) and *Pseudomonas aeruginosa*. Previously, Dr. Morris was a Senior Research Associate in Translational Medicine at the Hospital for Sick Children (Toronto) while concurrently being a Research Fellow at Cystic Fibrosis Canada, where she developed a strong foundation in studying biofilm-mediated antimicrobial resistance in chronic *P. aeruginosa* infections in individuals with cystic fibrosis. She earned her doctorate in Environmental Applied Science with a microbiology concentration from Toronto Metropolitan University, investigating the prevalence and transport of zoonotic pathogens within environmental biofilms. Her current work integrates clinical and environmental sampling, microbiology, and translational approaches to elucidate how biofilm communities and interspecies interactions shape chronic infections.

Michelle Crum, PhD (UTHSCT)

Associate Professor, Department of Medical Education
Division Chief, Preventive Medicine and Population Health
Department of Preventive, Occupational and Environmental Medicine
APHL-CDC Laboratory Fellowship Program Coordinator
Administrative Lab Director, Public Health Laboratory of East Texas
Responsible Official, Public Health Laboratory of East Texas



Dr. Crum is a molecular biologist and virologist specializing in emerging infectious diseases and pandemic preparedness. She directs the *Invaders* medical microbiology course at UT Tyler School of Medicine and leads the East Texas Wastewater Project, a regional pathogen surveillance initiative. As Laboratory Director and Responsible Official for the Federal Select Agent Program, she oversees biosafety and biothreat detection across 35 counties. Dr. Crum also coordinates the APHL/CDC Fellowship Program, supporting workforce development in public health laboratories.

Guohua Yi, PhD (UTHSCT)

Professor
Department of Cellular and Molecular Biology



Dr. Guohua Yi joined the faculty at the University of Texas at Tyler Health Science Center in September 2019 as an Associate Professor. He completed his PhD studies at Wuhan University, China, majoring in Molecular Virology. He then pursued his postdoctoral training at Rutgers University and at the Langone Medical Center of New York University. He then joined Texas Tech University Health Sciences Center as a junior faculty member. Dr. Guohua Yi's research interests are in immunopathogenesis, gene therapy, and vaccine development for a variety of devastating viral diseases, such as HIV, Zika, influenza viruses, and tuberculosis. Currently, his research focuses on developing immunotherapy and vaccines against HIV and tuberculosis infections and coinfections. In addition, his lab's research also includes phage therapy for the treatment of drug-resistant bacterial infections, such as *Mycobacterium tuberculosis*, *Klebsiella pneumoniae*, and NTM infections, the role of HIV/Mtb-induced metabolites in regulating immune responses to HIV/Mtb infection, and the development of a universal vaccine for HIV and influenza viruses, etc. Dr. Yi's research has been funded by the National Institute of Allergy and Infectious Diseases (NIAID) and the National Heart, Lung, and Blood Institute (NHLBI), as well as Common Funds of the National Institutes of Health (NIH). Dr. Yi has published over 30 peer-reviewed journal papers and has served as an ad hoc member of >20 NIH study sections.

Joshua Banta, PhD (UTT)

Professor

Department of Biology

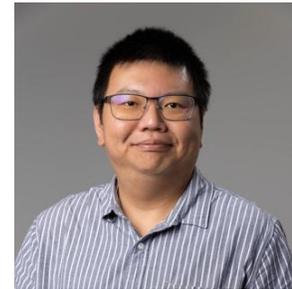


Dr. Banta is the Director of the Center for Environment, Biodiversity, and Conservation. The Banta Lab centers on evolutionary genomics and ecology to study how ecological, genetic, and evolutionary processes shape biodiversity across scales from genes to landscapes. We focus on the distribution of trait variation, the genomic architecture underlying adaptation, and the ecological contexts that influence survival, reproduction, and geographic range limits. Our approach blends genomics, population and quantitative genetics, ecological niche modeling, and field-based research to address both fundamental and applied questions in biology.

Wei-Chin Ho, PhD (UTT)

Assistant Professor

Department of Biology



Dr. Ho's research focuses on evolutionary mechanisms that shape the genetic and phenotypic diversity of microbes. His research approaches typically include experimental evolution, bioinformatic analysis of multi-omic data, and theoretical modeling. The ongoing topics include environmental influences on the rates and effects of spontaneous mutations, plasticity and robustness in gene expression, and the strength of selection and drift in evolution. He is also interested in studying the traits relative to the fitness and identifying the underlying molecular mechanisms. The traits of interest include growth curves, metabolism, biofilm formation, and resistance to antibiotics.

Chris Holmquist, PhD (UTHSCT)

Program Manager

Biotechnology M.S. Director

School of Medicine



Dr. Holmquist is the Director of the Biotechnology Master of Science Program at UT Tyler's School of Medicine and manages the Integrated Biomedical Sciences PhD and two post-baccalaureate certificates. His previous research includes mRNA metabolism, cell cycle pathways, deep-sequencing library development, CRISPR genome editing, and high-throughput screening methods.

Pierre Neuenschwander, PhD, F.A.H.A. (UTHSCT)

Professor of Cellular & Molecular Biology
Founding Director of the Ph.D.
in Integrated Biomedical Sciences program
Department of Cellular & Molecular Biology
School of Medicine



Dr. Neuenschwander is the Director of the Ph.D. in Integrated Biomedical Sciences program in the Department of Cellular & Molecular Biology within the UT Tyler School of Medicine. His research interests include structure/function studies of blood coagulation factors, enzymology, the development of hemocompatible surfaces, the role of coagulation in the pathogenesis and propagation of pulmonary distress in influenza, as well as Molecular Dynamics simulations of various coagulation complexes using Lonestar6 at the Texas Advanced Computing Center in Austin.

Chelsea “Raulie” Raulerson, PhD (UTHSCT)

Staff Scientist
Bioinformatician



Stephanie Fischer Daugherty, PhD (UTHSCT)

Associate Professor of Medical Education
Basic Science Educator
School of Medicine



Dr. Daugherty has been working to educate health professionals in East Texas for 14 years, teaching Microbiology and Biology of Disease. She received her PhD from the Mayo Graduate School in Rochester, MN, studying neuron apoptosis and survival in primary culture and in vivo. She was an instructor for Microbiology at the University of Colorado School of Medicine before building and teaching courses at UT Tyler. She is currently an Associate Professor for Medical Education at the UT Tyler School of Medicine.

Shashi Kant PhD (UTHSCT)

Professor

Division of Infectious Diseases

School of Medicine

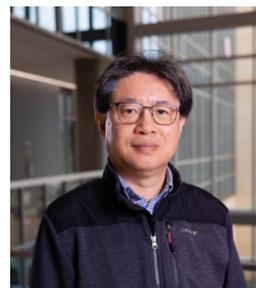


Dr. Shashi Kant, Professor in the Division of Infectious Diseases, Department of Medicine, UT Tyler School of Medicine, leads a translational research program aimed at advancing therapeutic strategies for drug-resistant tuberculosis and non-tuberculous mycobacteria (NTM) lung infections. His work leverages a regulatory agency-endorsed hollow fiber system model to conduct advanced pharmacokinetic/pharmacodynamic studies, integrating mathematical modeling, genomics, and transcriptomics to translate laboratory findings into clinical applications. He recently launched UT Tyler's first drug development initiative for Buruli ulcer, a rare and neglected tropical disease. Dr. Kant has received funding support from NIH, Cystic Fibrosis Foundation, the American Thoracic Society Foundation, UT System STAR award, and several internal grants, serves as an expert on the drug intervention and selection committee for clinical trials, and as a reviewer for several grant-making agencies and peer-reviewed journals in the field of infectious diseases. Dr. Kant is deeply committed to addressing healthcare challenges related to treatment access, cost, and the gap between pre-clinical discovery and clinical application.

Lianghao Ding, PhD (UTHSCT)

Department of Cellular and Molecular Biology

Bioinformatician

**May Abdelaziz, PhD (UTT)**

Associate Professor

Pharmaceutical Sciences and Health Outcomes



Dr. May Abdelaziz is a faculty member at the Fisch College of Pharmacy, The University of Texas at Tyler. Her research focuses on the role of kinases in cell signaling in both mammalian and bacterial systems. She is actively developing kinase inhibitors with novel anticancer mechanisms as well as bacterial resistance-modifying agents that resensitize bacteria to existing antibiotics.

Galina Florova, PhD (UTHSCT)

Professor

Department of Cellular and Molecular Biology



Dr. Galina Florova graduated with a Master's Degree in Microbial Engineering from the Moscow Technological Institute of Food Industry. She completed a Ph.D. in Genetics at the Institute for Genetics and Selection of Industrial Microorganisms in Moscow, Russia. She continued her training as a postdoctoral fellow at the University of Maryland and Virginia Commonwealth University, later working as a Research Assistant Professor at Virginia Commonwealth University and Portland State University. Dr. Florova joined the faculty at the University of Texas Health Science Center at Tyler in 2009 and is currently serving as an Associate Professor in the Department of Cellular and Molecular Biology. Her scientific interest in basic and translational research is supported by a broad background in cell and molecular biology, working with animal models—including a rabbit model of empyema, and overall extensive experience in bacterial genetics and physiology. Dr. Florova has co-authored more than 45 publications, and her research is currently funded by the NIH.

Tanya Brown, PhD (UTT)

Assistant Professor

Department of Biology



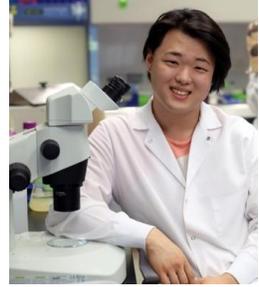
Dr. Tanya Brown's lab studies how cnidarians (corals and sea anemones) respond to marine pathogens. We are particularly interested in how the cnidarian immune system responds to pathogenic microbes under increased water temperatures. One of our current projects studies whether cnidarians possess immune priming whereby the organism is able to respond quicker to encounters with the same bacteria. Dr. Brown teaches Intro to Microbiology for nursing students in the biology department.

Jon Seal, PhD (UTT)

Professor

Department of Cellular and Molecular Biology

**Alex Kang, PhD (ASM Young Ambassador to Texas)
Postdoctoral Fellow
Houston Methodist Research Institute**



Dr. Alex Kang is a postdoctoral fellow at Houston Methodist Research Institute in the laboratories of Dr. Will Miller and Dr. Cesar Arias, studying antimicrobial resistance and iron metabolism in the human opportunistic pathogen *Pseudomonas aeruginosa*. Prior to joining Houston Methodist, he completed his graduate training in biochemistry and cell biology with Dr. Natasha Kirienko at Rice University, studying siderophore-mediated virulence in *P. aeruginosa*. Dr. Kang is the current ASM Young Ambassador to Texas, having previously served as president of the ASM Texas Medical Center Student and Postdoc Chapter.

