



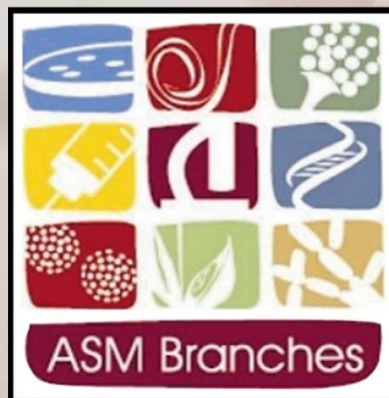
**Texas**  **Branch**

AMERICAN SOCIETY FOR MICROBIOLOGY

# 2022 FALL MEETING

**HOUSTON, TEXAS**

**11/10/2022 - 11/12/2022**



**Hosted by Rice University**

**6100 Main St, Houston, TX 77005**

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## Past Texas Branch ASM Presidents

- James Stewart 1999-2001
- Karl Klose (University of Texas Health Science Center at San Antonio) 2001-2003
- Robert McLean (Texas State University at San Marcos) 2003-2005
- Heidi Kaplan (University of Texas Medical School at Houston) 2005-2007
- Poonam Gulati (University of Houston Downtown) 2007-2009
- Marvin Whiteley (University of Texas at Austin) 2009-2011
- Todd Primm (Sam Houston State University) 2011-2013
- Kendra Rumbaugh (Texas Tech University Health Sciences Center) 2013-2015
- Ali Azghani (University of Texas at Tyler) 2015-21017
- Lee Hughes (University of North Texas) 2017-2019
- Madhusudan Choudhary (Sam Houston State University) 2019-2021



# Meeting Venue

Thursday, November 10 – Saturday November 12

The meeting will begin Thursday late afternoon, and end Saturday at noon.

All student talks and posters will be on Friday. The banquet will be Friday evening.

## **BIOSCIENCE RESEARCH COLLABORATIVE (BRC)**

6500 Main St, Houston, TX 77030

- If you stay at the Hilton Houston Plaza/Medical Center 6633 Travis Street, Houston, TX, 77030, you can walk to the conference.

## **Parking**

- There is a \$20 self-parking fee for the Hilton Houston Plaza/Medical Center.
- If you drive to the conference and need to park on site (at the BRC building where conference will be held), parking is \$1/12 min, with a max of \$12/day, for a single entry on the Rice University campus. If you leave and return later, you will pay the charge again.





# Friday Evening Banquet

## Glasscock School of Continuing Studies, First floor Commons

6100 Main St, Houston, TX 77005



### Directions:

#### Walking (Recommended, 8 min walk, 0.4 miles)

- Upon leaving the BRC, turn onto University Drive. (Perpendicular to Travis St, which runs between the hotel and the conference site).
- Walk down University away from the traffic light for 3 blocks to Stockton St. (There is a traffic light at University and Stockton.)
- Turn right onto Stockton and walk past the Rice Police Department.
- The Glasscock Building is the SECOND building on the left, with the Cabbage sculptures on the lawn.

#### Driving (Parking is \$1/10 minutes, \$12/day maximum for either lot)

- *Very limited parking* is available at the Moody Lot (~25 spaces total, some may be occupied). This lot is across the street from the Glasscock Building and is indicated by an 'M' above.
- Additional parking is available at West Lot 2 (see map on the next page), which is 0.3 miles from the Glasscock Building.



# Meeting Sponsors



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# ACKNOWLEDGEMENTS

## **Organization Committee:**

Natasha Kirienko, Chair

## **Poster Session:**

Heidi Kaplan

## **ASM Branch Coordination:**

Kelli Palmer, Gregory Frederick, and Trish Baynham

## **Logistical Support:**

Gulf Coast Consortia, AMR Cluster (Special thanks to Dawn M. Koob and Suzanne Tomlinson)

ASM - Texas Medical Center Chapter (Special thanks to Alex Kang)

Alexey Revtovich

**Abstract book:** Alexey Revtovich

## Opening Keynote Speaker

### Dr. Danielle Garsin's Bio

**Dr. Garsin** is a professor in the McGovern Medical School Department of Microbiology and Molecular Genetics at the University of Texas Health Science Center at Houston. Dr. Garsin came to UTHealth as an assistant professor in 2004 following a postdoctoral fellowship at Massachusetts General Hospital/Harvard Medical School. She earned her Ph.D. in Biochemistry at Harvard University and her B.S. in Biological Sciences at Cornell University.

Dr. Garsin is interested in microbial pathogenesis, gene regulation, host-microbe, and microbe-microbe interactions. Her studies are centered on the biology of human bacterial pathogens such as *Enterococcus faecalis*. One NIH-funded research focus is on the roles and regulation of ethanolamine utilization. Another is on the biology of the immune responses elicited in the model host *Caenorhabditis elegans*. Finally, Dr. Garsin studies the interactions between *E. faecalis* and the human fungal pathogen, *Candida albicans*. She and her collaborators discovered that the microbes inhibit each other's virulence leading to the identification of compounds with potential for anti-infective therapeutic development.

Dr. Garsin has received many commendations for excellence in research and education. In 2004, she received an Ellison Medical Foundation New Scholar Award in Global Infectious Disease. In 2008, she was awarded a UT Young Investigator award. She was the recipient of the Dean's Teaching Excellence Award in multiple years. Finally, Dr. Garsin was elected as a Fellow to the American Academy for Microbiology in 2019. She served as a permanent member of the Prokaryotic Cell and Molecular Biology (PCMB) NIH review group and is currently a permanent member of Innate Immunity and Inflammation (III). Dr. Garsin is also currently an associate editor of *PLOS Genetics* and on the editorial board of *mBio*.



## Closing Keynote Speaker

### ASM Distinguished Lecturer

#### Dr. Miriam Braunstein's Bio

**Dr. Miriam Braunstein** is a Professor of Microbiology and Immunology at the University of North Carolina School of Medicine. She received her Ph.D. from Princeton University, where she carried out graduate research with Dr. James Broach on the Sir2 protein of *Saccharomyces cerevisiae*, histone deacetylation, and transcriptional silencing. After completing her Ph.D. degree, she became a Life Sciences Research Foundation (LSRF) Fellow working at the Albert Einstein College of Medicine with Dr. William Jacobs Jr. It was during her postdoctoral training that she began studying *Mycobacterium tuberculosis*, the bacterial pathogen responsible for tuberculosis. Dr. Braunstein's laboratory studies the basic biology and pathogenic mechanisms of mycobacterial pathogens, including *M. tuberculosis* and nontuberculous mycobacteria. Her research includes mechanistic studies of mycobacterial protein secretion pathways and of secreted effector proteins that promote mycobacterial survival in macrophages. Her laboratory also collaborates on translational projects to develop new therapies for mycobacterial disease that include exploring the potential to use bacteriophage to treat mycobacterial disease. Dr. Braunstein is the recipient of a Burroughs Wellcome Fund Investigators in the Pathogenesis of Infectious Disease Award and a Fellow of the American Academy of Microbiology.



#### Dr. Braunstein's Personal Statement

I am passionate about training the next generation of scientists and in helping trainees of all levels achieve their career goals. I am the PI of an NSF-funded Summer Undergraduate Research Experience Program at the University of North Carolina. This program provides opportunities for students from groups underrepresented in the sciences or from schools with limited research capacity to work in UNC laboratories for an authentic summer research experience. I also founded the Southeastern Mycobacteria meeting, which provides students and postdoctoral trainees with opportunities to present their research and network with other scientists. I am an ASM member since 1996. I served as the ASM Division U (Mycobacteriology) Chair. I am currently a member of the ASM Journal of Bacteriology editorial board, a member of the ASM Press Committee, and an editor of the ASM Press Gram Positive Pathogens book published in 2019.



# Fall 2022 Texas Branch ASM Meeting

## Day 1, Nov 10

Location: BRC

3:00 – 6:00 pm

**Registration + Appetizers** (pre-function space)

5:00 pm

**Opening /Welcome** (Auditorium): **Kelly Palmer**, UT Dallas; President, Texas Branch ASM, & **Natasha Kirienko**, Rice University; Organizer

5:10 pm

Speaker Introduction: **Natasha Kirienko**, Rice University

5:15 – 6:15 pm

**Opening Keynote: Danielle Garsin**, UT Health

Infectious diseases discovery using the microbiovore *Caenorhabditis elegans*

## Day 2, Nov 11

Location: BRC

Vendor exhibit in the main hall & Event Space

7:30 – 12:00 pm

**Registration**

7:30 – 8:20 am

**Breakfast** (pre-function space)

7:30 – 8:20 am

**Mentoring event (BRC 106): Careers in STEM**

Panelists: **Heer Mehta** (industry experience), **Daniel Kirienko** (research administration), **Jennifer Walker** (academic faculty member), **Wesley Long** (clinical research experience).

8:30-10:20 am

**Parallel sessions, faculty presentations**

**Medical Microbiology (Main Auditorium)**

Chair: **Jose L. Lopez-Ribot**, UTSA

Faculty Speakers:

8:35 – 9:00 am

**Jesus Romo**, UTSA

Characterizing the role of *Candida* species during gastrointestinal infection by *Clostridioides difficile*

9:00 – 9:25 am

**Dmitrios Kontoyiannis**, MD Anderson

COVID-19-associated mucormycosis

9:25-9:50 am

**Jennifer Walker**, UT Health

Investigating the recalcitrance of *S. aureus* isolates to prophylactic antibiotic treatment

9:55 – 10:20 am

**Natasha Kirienko**, Rice University

Know your enemy: characterization of acute virulence factors from *P. aeruginosa*.

**General Microbiology (Event Space)**

Chair: **Helene Andrews-Polymenis**, TAMU

Faculty Speakers:

8:35 – 9:00 am

**Andrea Mitchell**, TAMU

Phospholipid transporters—why have three?

9:00 – 9:25 am

**Despoina Mavridou**, UT Austin

Cell envelope protein homeostasis underpins the evolution of antibiotic resistance

9:25 – 9:50 am

**Julian Hurdle**, TAMU

Decoding a cryptic mechanism of metronidazole resistance among globally disseminated

fluoroquinolone-resistant *Clostridioides difficile*

9:55 – 10:20 am **Jolene Ramsey**, TAMU

Timing your escape: mechanisms phages use to lyse their bacterial hosts

10:20 – 10:40 am **Break**

10:40 – 12:10 pm **Parallel sessions, trainee presentations**

**Medical Microbiology (Main Auditorium)**

S.E. Sulkin Award - Oral graduate student presentation award in Medical Microbiology

Chair: **Nicole De Nisco**, UT Dallas

10:40 - 10:55 am **Caroline Black**, Texas Tech University

Mechanisms of altered antibiotic susceptibilities in a polymicrobial community

10:55 - 11:10 am **Braden Shipman**, University of Texas at Dallas

identification and characterization of chondroitin sulfate degradation and metabolism by uropathogenic *Proteus mirabilis*

11:10 - 11:25 am **Brittany Shapiro**, TAMU Health Science Center

*Borrelia burgdorferi* BosR binds small non-coding RNAs (sRNAs): implications for borrelial post-transcriptional gene regulation and pathogenesis

11:25 - 11:40 am **Nowrosh Islam**, University of Texas at Arlington

Peptidoglycan recycling promotes outer membrane integrity and carbapenem tolerance in *Acinetobacter baumannii*.

11:40 - 11:55 am **Alex Kang**, Rice University

Utilizing *in vitro* pathosystems to identify novel antivirulence therapeutics against *Pseudomonas aeruginosa*

11:55 - 12:10 pm **Lauren Lynch**, Baylor College of Medicine

Neonatal cholestasis hinders microbiome maturation and bile salt deconjugation in preterm infants

**General Microbiology (Event Space)**

O.B. Williams Award - Oral graduate student presentation award in General Microbiology

Chair: **Cathy Wakeman**, Texas Tech University

10:40 - 10:55 am **Alexis Carey**, TAMU

Utilization of growth rates and swimming motility to evaluate fitness of *S. Typhimurium* after phase I or II flagellin loss

10:55 - 11:10 am **Kristen Curry**, Rice University

Emu: species-level microbial community profiling of full-length 16S rRNA Oxford Nanopore sequencing data

11:10 - 11:25 am **Kyra Elise Groover**, University of Texas at Austin

Development of a synthetic serum active peptide

11:25 - 11:40 am **Allison Judge**, Baylor College of Medicine

Mapping the determinants of catalysis and substrate specificity of the antibiotic resistance enzyme CTX-M  $\beta$ -lactamase

11:40 - 11:55 am **Ashvini Ray**, The University of Texas at Dallas

Roles of *dksA*-like genes in *Paracoccus denitrificans*

11:55 - 12:10 pm **Xinyi Zhang**, Baylor University

Nonsense-mediated mRNA decay of metal-binding activator MAC1 is dependent on copper levels and 3'-UTR length in *Saccharomyces cerevisiae*

### **Undergraduate Presentations (BRC 106)**

Sarah A. McIntire Award - Oral undergraduate student presentation award

Chair: **Blake Hanson**, UT Health

- 10:40 - 10:55 am      **Camille Condron**, University of Texas at Arlington  
Inoculant carrier formulation on survivability of a drought-tolerant *Bradyrhizobium* isolate under desiccation stress
- 10:55 - 11:10 am      **Saoirse Disney-McKeethen**, Rice University  
Evolving *Pseudomonas aeruginosa* to colistin in microfluidic emulsions recapitulates clinically relevant mutations that are depleted in bulk culture
- 11:10 - 11:25 am      **Irene Hau**, University of Texas at Dallas  
Gain of function cytolysin variant expressed by clinically isolated *Enterococcus faecalis*
- 11:25 - 11:40 am      **Aeron Pennington**, Tarleton State University  
Modulation of bacterial host phenotypes by mycobacteriophage pixie gene products
- 11:40 - 11:55 am      **Star Okolie**, University of Texas at Dallas  
Defining the spatial and temporal dynamics of the urogenital microbiome in postmenopausal women
- 11:55 - 12:10 pm      **Filemon C. Tan**, Rice University  
Pyocins contribute to ST111 strain dominance in *P. aeruginosa* inter-strain competition

12:10 – 12:30 pm      **Break**

12:30 – 1:00 pm      **Lunch** (Event Space)

1:00 – 2:00 pm      **Poster session A** (Event Space)

2:00 – 3:00 pm      **Poster session B** (Event Space)

3:00 – 3:30 pm      **Break**

3:30 – 4:40 pm      **Parallel sessions**

### **Careers in Transition (Main Auditorium)**

Thomas S. Matney Postdoctoral Fellow Oral Presentation Award

Chair: **James Chappell**, Rice University

- 3:30 - 3:55 pm      **Chelsea Hu**, TAMU (Faculty)  
System dynamics and feedback control in synthetic biology
- 3:55 - 4:10 pm      **Giuseppe Buda De Cesare**, Univ. of Texas McGovern Medical School  
Characterization of activity and mechanism of action of the *Enterococcus faecalis* bacteriocin EntV on *Candida albicans*
- 4:10 - 4:25 pm      **Anwar Kalalah**, University of Texas at San Antonio  
Pathogenomes and phylogenomic comparison Of 'Big Six' Non-O157 Shiga toxin-producing *Escherichia coli*
- 4:25 - 4:40 pm      **Saugata Mahapatra**, Texas A&M University



*Coxiella burnetii* requires type IVB secretion system to suppress host TLR3/TRIF-dependent NF-κB-activation

### **Environmental Biology/Ecology (BRC 106)**

O.B. Williams Award - Oral graduate student presentation award in General Microbiology

Chair: **Lory Santiago-Vázquez**, U of H Clear Lake

3:30 - 3:55 pm **Michael LaMontagne**, U of H Clear Lake (Faculty)

Application of MALDI-ToF mass spectrometry systems to environmental microbiology

3:55 - 4:10 pm **Chahat Upreti**, The University of Texas at Dallas

The clinic vs the farm: exploring prevalence and function of CRISPR-Cas in agriculturally relevant niches

4:10 - 4:25 pm **Meaghan Rose**, University of Texas at Arlington

Induction of root nodulation independent of nitrogen fixation by *Leifsonia shinshuensis* in *Aeschynomene indica* plants

4:25 - 4:40 pm **Stephan Joseph**, University of Texas at Tyler

Mercury contamination characterized by microbial Hg methylation genes in Martin Lake, East Texas

4:40 - 6:00 pm **Break**

5:00 - 6:00 pm **Closing Keynote (Main Auditorium)**

**ASM Distinguished Lecturer Miriam Braunstein**, UNC, School of Medicine

The bacterial protein export zoo

6:00 - 6:30 **Walk to new location: Glasscock School of Continuing Studies, Commons area**

6:30 - 7:45 pm **Dinner**

7:45 pm – 8:10 pm **Student Awards / Other Awards and Distinctions**

8:10 pm **Closing remarks**

### **Day 3, Nov 12:**

8:00 – 8:50 am **Breakfast**

8:00 – 8:50 am **Mentoring event (BRC 106): Improving DEI in Research Environments**

Panelists: **Cecilia Fernandez** (Assistant Director of Diversity, Equity, Inclusion and Outreach) and **Jorge Loyo Rosales** (Associate Director of Education)

9:00 - 12:30 pm **Parallel sessions**

### **Education and Pedagogy Session (BRC 106)**

Co-chairs: **Todd Primm**, Sam Houston State University & **Gregory Frederick**, American University of the Caribbean School of Medicine

9:00 - 9:45 am **Todd Primm**, SHSU: Teaching metacognition to students: I never metacognition I didn't like

9:45 - 10:30 am **Jacqueline Horn**, Houston Baptist University

Learning to think critically: performing CURE research to Hone students' thinking skills

10:30 - 10:45 am **Break**

10:45 - 11:30 am **Greg Frederick**, AUC School of Medicine

Have medical schools flipped out? Or is it a case for team-based Learning

11:30 - 12:15 pm **Panel Discussion**

### **Workshops (Event Space)**

9:00 - 9:55 am **Michael LaMontagne**, U of H Clear Lake

Strain-level bacterial identification with MALDI-TOF MS: A hands-on workshop from isolate to data analysis

10:00 - 10:45 am **Jennifer Spinler & Ruth Ann Luna**, Baylor College of Medicine

Pathogen epidemiology using whole genome sequencing

10:50 - 11:35 am **Todd Treangen**, Rice University

Methods for strain-level characterization of metagenomic sequencing data

11:40 - 12:25 pm **Yahan Wei**, UT Dallas

RNA-sequencing analysis for bacterial gene expression

12:25 pm **Adjourn**

## Posters

GENERAL MICROBIOLOGY - graduate students				
Samuel Kaplan Award Poster graduate student presentation				
A	GS P1	Jacqueline Carroll	Baylor University	Differential gene regulation of the iron transcriptome by nonsense-mediated mRNA decay in <i>Saccharomyces cerevisiae</i>
B	GS P2	Andrea Garza Elizondo	Rice University	Targeted, high-throughput transcriptional activation via a CRISPR-associated transposon System
A	GS P3	Sun-Young Kim	The University of Texas at Austin	Secretion of heterologous peptides from Gram-negative bacteria
B	GS P4	Sinjini Nandy	The University of Texas at Arlington	Molecular interactions between peptidoglycan integrity maintenance and outer membrane lipid asymmetry in <i>Acinetobacter baumannii</i>
A	GS P5	Trusha Parekh	University of Texas at Dallas	New insights into the regulation of methylotrophic growth in <i>Paracoccus denitrificans</i>
B	GS P6	Xinhao Song	Rice University	Methyl halide transferase-based gas reporters for quantification of filamentous bacteria in microdroplet emulsions
A	GS P7	Mady Telford	The University of Texas at Austin	Bacterial secretion of affibodies and other biologics.
B	GS P8	Suman Tiwari	University of Texas at Dallas	Development of a high-throughput minimum inhibitory concentration (HT-MIC) testing workflow
A	GS P9	Aparna Uppuluri	University Of Texas At Dallas	Assessing lysine-lipid asymmetry in the Group B streptococcal membrane by lipid labeling
B	GS P10	Fabiha Zaheen Khan	University of Texas at Dallas	Elucidating the function of an unusual hydrophobic peptide in <i>Pseudomonas aeruginosa</i>
A	GS P11	Brenda Zarazua-Osorio	University of Houston	Characterizing the autoregulation of Spo0A, the master regulator of biofilm and sporulation in <i>Bacillus subtilis</i>

PATHOGENIC MICROBIOLOGY - graduate students				
Samuel Kaplan Award Poster graduate student presentation				
B	GS P12	Priya Christensen	University of Texas at Dallas	Expression of diverse streptococcal multiple peptide resistance factors and lipid hydrolase in <i>Streptococcus mitis</i>
A	GS P13	Shane Cristy	University of Texas Health Sciences Center Houston	<i>Candida albicans</i> biofilm development in urinary catheters
B	GS P14	Jacob Hogins	The University of Texas at Dallas	The distinct transcriptome of virulence-associated phylogenetic group B2 <i>Escherichia coli</i>
A	GS P15	Bhuvana Lakkasetter Chandrashekar	The University of Texas at Dallas	Development of a co-culture model for assessing competing mammalian host cell and bacterial attachment on dental biomaterials



B	GS P16	Melissa Martinez	UT Health Houston	A tractable nematode model for the emerging fungal pathogen, <i>Candida auris</i>
A	GS P17	Stephany Navarro	Texas Tech University Health Sciences Center	<i>Gardnerella vaginalis</i> growth is eliminated by a novel narrow-spectrum factor secreted by <i>Lactobacillus jensenii</i>
B	GS P18	Jessica O'Berry	University of Texas at San Antonio	Role of Borrelia unfed tick induced protein (BtiP) in the colonization of the Lyme disease agent within tick and mammalian hosts
A	GS P19	Irvin Rivera	The University of Texas at San Antonio	Removal of phosphate from lysate protein by a recombinant phosphase from <i>Acinetobacter baumannii</i>
B	GS P20	Qi Xu	Rice University	A novel type of cytotoxic membrane vesicles produced by <i>Pseudomonas aeruginosa</i>

<b>AMR &amp; MICROBIAL ECOLOGY - graduate students</b>				
<b>Samuel Kaplan Award Poster graduate student presentation</b>				
A	GS P21	Francesca Agobe	Texas A&M University School of Medicine	Novel drug combinations to treat <i>Rhodococcus equi</i> Infection
B	GS P22	Samuel Cornelius	University of Texas at Dallas	Antigen stabilized vaccines against recurrent urinary tract infection
A	GS P23	Jiayi Fan	Baylor College of Medicine	Discovery of novel broad-spectrum antibiotics and inhibitors for $\beta$ -lactamases using combinatorial chemistry approaches
B	GS P24	Jindanuch Maneekul	University of North Texas	Novel <i>Streptomyces</i> bacteriophage endolysins: isolation, purification, and functional domain testing.
A	GS P25	Angela O'Donnell	The University of Texas at Austin	Nanobodies: overcoming the outer membrane barrier with small, charged proteins
B	GS P26	Angelica Ponce	University of Texas-Arlington	Effects of a drought-tolerant <i>Bradyrhizobium</i> isolate on soybean growth in Arkansas
A	GS P27	Ariel Robles	Texas A&M University - San Antonio	Microbial Source Tracking in Ambient Waters
B	GS P28	Gloria Rodriguez	Texas A&M University-San Antonio	Developing a faster, inexpensive, accessible, microbial detection method for wastewater surveillance
A	GS P29	Malyn Selinidis	Rice University	A ribozyme for non-destructive reporting of gene transfer within a soil consortium
B	GS P30	Lyndsy Stacy	Texas A&M University San Antonio	Agent-based modeling to establish a protocol for sampling DNA from the air
A	GS 31	Adeline Supandy	Rice University	Activated charcoal as a sink for diffusing AHL molecules in the microdroplets system
B	GS P32	Arshya Tehrani	University of Texas at Arlington	Characterizing putative DD-carboxypeptidases that promote outer membrane integrity in <i>Acinetobacter baumannii</i>
A	GS P33	Jacob Zulk	Baylor College of Medicine	Bacteriophage resistance associated with reduced bacterial fitness in the urinary environment

<b>MICROBIOME &amp; COMPUTATIONAL BIOLOGY - graduate students</b>				
<b>Samuel Kaplan Award Poster graduate student presentation</b>				
B	GS P34	A H M Zuberi Ashraf	The University of Texas at Austin	Stability of honey bee gut symbiont <i>S. alvi</i> traits during laboratory propagation
A	GS P35	Tallon Coxe	University of North Texas	DL-ARG: leveraging deep learning to predict and classify antimicrobial resistance from long and short-sequence reads
B	GS P36	Sarobi Das	University of Texas at Arlington	The effect of inoculation of beneficial bacteria on microbial diversity in soil infected with a pathogenic fungus.
A	GS P37	Ronika De	University of North Texas	CAFÉ_GI: A tool for identification of genomic islands in bacterial genomes
B	GS P38	Ken Dickinson	University of Houston - Clear Lake	Assembly of quality genomes from metagenomic reads generated from the rhizoplane of wheat
A	GS P39	Kaelyn Dobson	Texas State University	Multi-species housing impacts: overlapping microbiomes - Preliminary Data
B	GS P40	Marlyd Mejia	Baylor College of Medicine	The second mouse gets the cheese: how the field of reproductive tract microbiology benefits off the generation of a humanized gut-microbiota mouse model
A	GS P41	Christian Peterson	University of Texas - Arlington	Effects of a drought-tolerant <i>Bradyrhizobium</i> isolate on soybean yield and the soybean rhizosphere microbiome
B	GS P42	Vaidehi Pusadkar	University of North Texas	Benchmarking metagenomic classifiers on simulated ancient and modern metagenomic data
A	GS P43	Shrestha Sujan	University of North Texas	Modelling the transmission of COVID-19 during the first wave in India using a data driven SEIRD model
B	GS P44	Muneer Yaqub	University of Texas at Dallas	Defining the evolutionary framework of colistin resistance in <i>Acinetobacter baumannii</i>

<b>GENERAL MICROBIOLOGY - undergraduate students</b>				
<b>Joan Abramowitz Award - Poster undergraduate student presentation</b>				
A	UP 1	Stephanie Marie Davidson	Texas A&M University-San Antonio	Use of <i>S. Aureus</i> to study airflow and filtration in a collegiate environment
B	UP 2	Taylor Holly	Sam Houston State University	Models for cellular aging in yeast
A	UP 3	Pranav Kumar	University of Texas at Dallas	Examining the effect of antibiotics on CRISPR-Cas defense efficacy against conjugative plasmids
B	UP 4	Jenny Le	University of Texas at Arlington	Nodule formation inhibited by <i>Paenibacillus sp.</i> isolated from Texas native <i>Aeschynomene indica</i> plants
A	UP 5	Cassandra Maldonado	Texas A&M San Antonio	Characterization of antibiotic production and microbial diversity in the soils of San Antonio
B	UP 6	Kyren Miller	The University of Texas at Tyler	Mercury reduction gene merA detection in Martin lake

A	UP 7	Julie Nguyen	The University of Texas at Dallas	Antimicrobial effects of human metabolite lysophosphatidylcholine
B	UP 8	Catherine Nickel	St. Edward's University	Standardization of <i>Saccharomyces cerevisiae</i> microplate reader covering parameters
A	UP 9	Heather Nolte	University of Houston - Clear Lake	Prevalence of antibiotic-resistant <i>Vibrio</i> strains in oysters harvested from Galveston Bay
B	UP 10	Madison Wolfrom	Sam Houston State University	Developing a cellular aging model in yeast
A	UP 11	Allison Wyrick	University of Houston - Clear Lake	Prevalence of antibiotic resistant bacteria on microplastics in Galveston Bay

<b>PATHOGENIC MICROBIOLOGY - undergraduate students</b>				
<b>Joan Abramowitz Award - Poster undergraduate student presentation</b>				
B	UP 12	Withdrawn		
A	UP 13	Alex Caron	Texas Christian University	Characterization of antibacterial mechanisms of zinc oxide in <i>Staphylococcus aureus</i>
B	UP 14	Guan Chen	University of Texas at Dallas	The Role of glycolipids in <i>Streptococcus sp.</i> 1643
A	UP 15	Luke Hamilton	Texas Christian University	Identifying novel mutants with increased susceptibility to hydrogen peroxide and reduced virulence in <i>Bacillus anthracis</i> Sterne
B	UP 16	Alexis Ho	University of Texas at San Antonio	Role of <i>Borrelia</i> sugar phosphorylation protein (BsuP) in the patho-physiology of Lyme disease agent.
A	UP 17	Jerril Jacob	McGovern Medical School, University of Texas Health Science Center at Houston, TX,	Bacteriophage-containing biodegradable microsphere technology to treat osteomyelitis
B	UP 18	Rebecca McGehee	Texas A&M University-San Antonio	Establishing an invertebrate infection model for <i>Staphylococcus hemolyticus</i>
A	UP 19	Christina Nguyen	University of Texas at Arlington (UTA)	Transcriptional regulation of lipoproteins Lpp1 and Lpp2 in the nosocomial pathogen, <i>Acinetobacter baumannii</i>
B	UP 20	Nikita Singh	Rice University	Exploring host-pathogen interactions in the liquid killing assay
A	UP 21	Justin Wright	University of Texas at Tyler	Genotypic and phenotypic association of antibiotic resistance in <i>Pseudomonas aeruginosa</i>



<b>POSTDOCTORAL FELLOW POSTERS</b>				
<b>Samuel Kaplan Award - Poster graduate student presentation</b>				
A	PDP 1	Ayan Chatterjee	University of Texas	The role and dynamics of ethanolamine-utilizing bacterial microcompartments
A	PDP 2	Carolaing Gabaldon	The University of Texas Health Science Center at Houston	CDC-48 influences SKN-1 activity in response to pathogen infection
A	PDP 3	Shantanu Guha	University of Texas Health Sciences Center in Houston	Development of novel antifungals against candida based on an antifungal peptide produced by <i>E. faecalis</i>
A	PDP 4	Venkatesh Kumaresan	UTSA	Cellular and transcriptional signatures of innate immune response following <i>Borrelia burgdorferi</i> infection of murine splenocytes unveiled by single cell RNA-Seq (scRNA-Seq)
A	PDP 5	Joana Rocha	Texas A&M University	Toxic mechanisms of STM3845 in <i>Salmonella Typhimurium</i>

<b>STAFF POSTERS</b>				
B	SP 1	Muqaddas Amer	The University of Texas at Dallas	Uncovering the mechanism behind metronidazole inactivation in <i>Enterococcus faecalis</i> and its role in protecting metronidazole-susceptible bacteria
B	SP 2	Sydney Hall	The University of Texas at Dallas	Putrescine as a requirement for pili-mediated surface motility in <i>Escherichia Coli</i>
B	SP 3	Deborah Omoregie	University of Texas at Arlington	LD-Transpeptidase regulatory elements promote the viability of lipooligosaccharide deficient <i>Acinetobacter baumannii</i>

<b>FACULTY POSTERS</b>				
B	FP 1	Yajuan Lin	Texas A&M University - Corpus Christi	Linking community structure to ecosystem functioning - specific plankton and interactions are good predictors of carbon export at the Western Antarctic Peninsula
B	FP 2	Alex Wong	Texas A&M	The fitness effects of antimicrobial resistance mutations in <i>E. coli</i> are modulated by strong genotype by environment interactions