



Friday, 27 February

- 8am **Board of Directors Meeting (8am-11:30am)**
College of Business (COB) 321
- 9am **Registration (9am-5pm)**
College of Pharmacy (WTB) - Outside 134
- 10am **Science Jeopardy (10am-11:30am)**
WTB 134
- 11:30am **Section Chair Pre-Session Meeting (11:30am-12:30pm)**
COB 307
- 12:30pm **Judges' Room**
COB 350.55
- 12:30pm **Biomedical Sciences I (12:30pm-2pm)**
COB 212
Chaired by: Dr. Joni Ylostalo
- 12:30pm **#001-U Mirtron-5010 Enhances Stemness and Iron Accumulation in Aggressive Breast Cancer Cells**
» [Noah Padilla](#), Reagan Farrell, Maya Vaela, Alejandro Ruiz, Trevor Jones, Dr. Kuan-Hui Ethan Chen
- 12:45pm **#002-U Screening Compounds for Their Anti-Cell Proliferation Properties**
» [Tina Prajapati](#), Dr. Vaishali Chaubal, Dr. Rachna Sadana
- 1pm **#003-U Histological Characterization of Cardiovascular Malformations in a Chick Model of Maternal Phenylketonuria**
» [Desarey Reyna Gaytan Robles](#), Danny Gutierrez, Dr. Nikki J. Seagraves, Dr. Adriana P. Visbal, PhD

- 1:15pm **#004-U The Skin Microbiome & Acne: How Common Skincare Ingredients Affect Bacteria and Inflammation**
» [Alanis Cotto](#), Irene Perry
- 1:30pm **#005-U Cytotoxicity of Freebase Nicotine and Its Analogs Using Cellular and Statistical Methods**
» [Kiera Griffin](#), Taylor Jefferis, Dominic Pruss, Mohana Sengupta, Dr. Rodney Sturdivant, Dr. Amanda Charlton-Sevcik, Dr. Robert Strongin, Dr. Christie Sayes
- 1:45pm **#006-G Production of 3-cyanopyridine upon vaping nicotinamide and evaluating the toxicological effects of individual and combined exposures via isobologram-based analysis**
» [Taylor Jefferis](#), Mohana Sengupta, Kiera Griffin, Dr. Robert Strongin, Dr. Christie Sayes
- 12:30pm **Chemistry & Biochemistry I (12:30pm-3pm)**
COB 112
Chaired by: Dr. Darrell Fry
- 12:30pm **#007-U Boron Is Special: Unique Role of Boron in C-B Bond Forming Reactions**
» [Avree Fields](#), Dr. John Gary
- 12:45pm **#008-U No Ring Required: Constraints for Organic Components in Redox Cooperativity**
» [Emma Patton](#), Dr. John Gary
- 1pm **#009-U Battle of the Geometries: Square Planar Versus Tetrahedral Geometry for Electronic Communication**
» [Aiyana Gonzalez](#), Dr. John Gary
- 1:15pm **#010-U The Great Shape Debate: How Geometry and Electron Count Affect Electronic Communication**
» [Sophia Myers](#), Dr. John Gary
- 1:30pm **#011-U The Crystal Clear Truth About Salts: A Dive into Characterization of Global Salt Samples**
» [Katelyn Jones](#), Dr. Alyx Frantzen, Dr. Julie Bloxson



Continued from Friday, 27 February

1:45pm **#012-U In Situ Characterization of HIMARS Launch Sites: A Proof of Concept for Portable XRF Screening**

» [Aaron Beavers](#), Dr. Kiley Miller

2pm **#013-U IMAC protein purification via Ni(II)-NTA and histidine tags: A computational approach of incremental binding energies**

» [Kaci Thomson](#), Dr. Brian Barngrover

2:15pm **#014-U Growth of Bismuth Nanoparticles from BiCl Salts Using DFT**

» [Barbie Adams](#)

2:30pm **#015-N The chemistry of the Si-Ge bond, 2**

» [Dr. Keith Pannell](#)

2:45pm **#016-N Designing Strategies of H-Bonded Chemosensors for Molecular Recognition**

» [Prof. Rashid Mia](#)

12:30pm **Conservation Ecology (12:30pm-2:30pm) and Section Meeting (2:30pm-2:45pm)**

COB 111

Chaired by: Dr. Wendi Wolfram

12:30pm **#017-U Wanted Dead, Not Alive: Using eRNA:eDNA ratios to assess viability of invasive apple snail (*Pomacea maculata*)**

» [Kylie Allemeier](#), Katelin Pilarski, Dr. Romi Burks, Dr. Matthew Barnes

12:45pm **#018-U Examining angiosperm conservation methods through the diet of *Bombus pensylvanicus***

» [Gabriel Ramos](#), Dr. Christopher Randle, Dr. Justin Williams

1pm **#019-U Where Could This Moth Go? Predicting Future Distribution Using SDMs**

» [Zyra Johnson](#), Dr. Christopher Randle

1:15pm

#020-U Effects of Invasive Chinaberry Tree Fruits on Invasive Asian Clams

» [Amy Lowe](#), Dr. Chris Distel

1:30pm

#021-G Comparing the efficacy of three crayfish sampling methods on two Texas SGCN *Procambarus* species during different seasons

» [Matthew Blow](#), McKenzie Adkins, Jared Dickson, Katrin Kellner, Dr. Archis Grubh, Dr. Matt Greenwold

1:45pm

#022-G Comparative physiology and thermal biology of sympatric toad species

» [Peter J. Babcock](#), Dr. William I. Lutterschmidt

2pm

#023-G Monitoring the effects of environmental variations on nesting success of Eastern Bluebirds (*Sialia sialis*) on a university campus

» [Gwendolyn Nichols](#), Jessica Coleman, Dr. Matt Greenwold

2:15pm

#024-G Environmental influences of eDNA detection and persistence inform sampling protocol

» [Dr. William I. Lutterschmidt](#), Kyra S. Woytek

12:30pm

Plant Biology (12:30pm-4pm) & Section Meeting (4-4:15pm)

COB 203

Chaired by: Dr. Kevin Eddy

12:30pm

#025-U Comparative Analysis of Anti-Hemolytic Properties in Ilex Species: A Study of Plant Extracts against *Streptococcus* and *Enterococcus* Bacteria

» [Atlanta Williams](#), Hanna Erfanian

12:45pm

#026-U Diquat Herbicide-Induced Effects on Cherry Tomatoes

» [Yamilex Hernandez](#), Dr. Honey Golden



Continued from Friday, 27 February

- 1pm **#027-U Gene flow between 'races' of the annual wildflower *Mentzelia pectinata* (Loasaceae) based on multiple microsatellite loci**
» [Gisela Guerrero](#), Ana Rodriguez, Hannah Anthony, Amy Osborn, Dr. Joshua Brokaw
- 1:15pm **#028-U Microhabitat variation influences streambed plant diversity at the Independence Creek Preserve**
» [Edmundo Avalos](#), Olivia Fischer, Dr. Matthew Allen
- 1:30pm **#029-U Development of new microsatellite loci to study gene flow in the annual wildflower *Mentzelia pectinata* (Loasaceae).**
» [Ana Rodriguez](#), Hannah Anthony, Gisela Guerrero, Dr. Joshua Brokaw
- 1:45pm **#030-G Shedding Light on Plant and Soil Sciences with Synchrotron-Based Spectroscopy**
» [Caleb Shackelford](#)
- 2pm **#031-N Microbial Strategies to Promote Legume Tolerance to Soil Alkalinity**
» [Dr. Ahmad Kabir](#)
- 2:15pm **#032-N Preserving the Biodiversity of the UT Permian Basin Kurtz Herbarium by Inclusion in the Texas Oklahoma Regional Consortium of Herbaria (TORCH)**
» [Irene Perry](#)
- 2:30pm **#033-N Expert in a Dying Field? Botany's Decline in Tuition-Dependent Colleges and Universities**
» [Dr. Joshua Brokaw](#)
- 12:30pm **Science Education (12:30pm-1:30pm) & Section Meeting (1:30pm-1:45pm)**
COB 214
Chaired by: Woody Cox

- 12:30pm **#034-N Navigating Human Values and Motives in STEM Education: Insights from the Preteen Years**
» Dr. Sajid Bashir, [Dr. Jingbo Liu](#)
- 12:45pm **#035-N The successful application of WOKE funding to STEM progress**
» [Dr. Keith Pannell](#)
- 1pm **#036-N A Pedagogical Experiment: Repackaging Introductory Biology Labs and Research Classes Into Professional Skills Courses**
» [Dr. Chris Distel](#)
- 2pm **Physics and Engineering (2pm-3pm) & Section Meeting (3pm-3:15pm)**
COB 214
Chaired by: Dr. Bryant Wyatt
- 2pm **#037-U A Novel Multiphysics Simulation Engine for Modelling High-Enthalpy Plasma-Surface Interactions in Hypersonic Flight Regimes**
» [John-Ryan Lawrence](#), Dr. Sajid Liu, Dr. Jingbo Liu
- 2:15pm **#038-G Benchmarking Transformer Models for the Classification of Gravitational-Wave Detector Glitches**
» [Rudhresh Manoharan](#), Brian Phillips, Tanish Chettiar, Dr. Gerald Cleaver
- 2:30pm **#039-N From Discovery to Application: Engineering Atomic Ternary Semiconductors into TRL-4 Resilient Power Modules**
» [Dr. Jingbo Liu](#), Dr. Sajid Bashir
- 2:45pm **Marine Science (2:45pm-4:30pm) & Section Meeting (4:30pm-4:45pm)**
COB 111
Chaired by: Annie Mowry
- 2:45pm **#040-U Impact of Topology on Coral Larvae Settlement on Concrete Matrices**
» [Jennifer Hunt](#), Dr. Matthew Barnes, Dr. Brian Flowers, Dr. Thomas Ready



Continued from Friday, 27 February

- 3pm **#041-U The Role of Symbiotic Status of *Exaiptasia diaphana* in *Serratia marcescens* Pathogenesis**
» [Amy Joffrion](#), Dr. Tanya Brown
- 3:15pm **#042-U Abundance and Disease Status of Starlet Corals in Roatán, Honduras**
» Gloria Dominguez, [Ashley Tejada](#), Kaylee Aguilar, Xaile Garza, Ana Quintanilla, Leon Rosales, Annie Mowry, Ashlyn Kennedy, Matthew Hicks, Racheal Gomez, Traesha Robertson, Dr. Stephanie Lockwood, Jacqueline Dove, Stephanie Randell
- 3:30pm **#043-U The Diversity of West Caribbean Octocorals in Roatán, Honduras**
» [Harrison Wolf](#), Christopher Allovio, Hannah Dawson, Zoe Hilliard, Traesha Robertson, Annie Mowry, Ashlyn Kennedy, Jacqueline Dove, Dr. Stephanie Lockwood, Stephanie Randell
- 3:45pm **#044-U A Longitudinal Study of Macroorganism Associations and Health Status of Demospongiae Species in Roatán, Honduras**
» [Cambria Blanton](#), Caden Helona, Ashlyn Kennedy, Anne Mowry, Traesha Robertson, Jacqueline Dove, Dr. Stephanie Lockwood, Naomi Hammond, Stephanie Randell
- 4pm **#045-U Rope Sponge Diversity and Health Status in Roatán, Honduras**
» [Yuto Goto](#), Nicholas Mischian, Tafadzwa Duri, Juliusz Bachleda-Curus, Traesha Robertson, Annie Mowry, Ashlyn Kennedy, Jacqueline Dove, Dr. Stephanie Lockwood, Stephanie Randell
- 4:15pm **#046-G From Anemone to Coral: Establishing *Nematostella vectensis* as a Translational Model for Coral Disease Research**
» [James Campbell](#), Dr. Tanya Brown

3:15pm **Neuroscience (3:15pm-3:30pm) and Section Meeting (3:30pm-3:45pm)**
COB 212
Chaired by: Dr. Seena Mathew

3:15pm **#047-N Effects of Transcranial Photobiomodulation on Cognitive Processes, Anxiety Symptoms, and Brain Hemodynamics**
» [Adrian Nguyen](#), Laura Gamboa, Isabelle Rose, Jordan Schwartz, Nicole J. Moore, Dr. Douglas Barrett, Dr. F. Gonzalez-Lima

3:15pm **Systematics & Evolutionary Biology (3:15pm-4:45pm) & Section Meeting (4:45pm-5pm)**
COB 112
Chaired by: Dr. Matt Greenwold

3:15pm **#048-U Gene Currents: Understanding Genetic Diversity of Apple Snails in Northern and Southern Belizean Watersheds**
» [Johun Reyes](#), Gage Mallo, Dr. Romi Burks

3:30pm **#049-U Opercularis Muscle in Facultatively Metamorphic Eurycea sp. A Comparison between Paedomorphs and Metamorphs**
» [Kelsey M. Malousek](#), Joseph Humphrey, Dr. Ruben U. Tovar, Dr. Thomas J. Devitt, Dr. David M. Hillis, Dr. Dana M. Garcia

3:45pm **#050-G Comparative morphology of the American and Houston Toad**
» [Lauren N. Scherrer](#), Dr. Juan D. Daza, Dr. William I. Lutterschmidt

4pm **#051-G Diversity and Mitogenomics of Archinominae Species (Annelida: Amphinomidae) From Marine Biodiversity Hotspots**
» [Bernard Mbithi](#), Dr. Fernando Calderón-Gutiérrez, Dr. Smart Utpal, Dr. Beatriz Yáñez Rivera, Dr. Elizabeth Borda

4:15pm **#052-G Adaptation to Acidic Environments Potentiates Pathogenicity of Bacteria**
» [Kingsley Amoateng](#), Wei-Chin Ho

4:30pm **#053-G Morphological variation in the molar dentition of a population of *Neotoma micropus* from Chaparral Wildlife Management Area, La Salle County, Texas**
» [Stacie Skwarcan](#), Christopher Bell



Continued from Friday, 27 February

3:30pm **Mathematics and Computer Science (3:30pm-4:30pm) & Section Meeting (4:30pm-4:45pm)**
COB 214
Chaired by: Todd Dole

3:30pm **#054-U Standardizing Academic Syllabi Using Artificial Intelligence**
» [Daniel Antonio](#), Prof. Dipak Singh

3:45pm **#055-U In Silico Design of Peptides to Prevent Insulin Aggregation**
» [Thanh Tien Dao](#), Dr. Bidisha Sengupta

4pm **#056-N Reasoning from the Code Image of a Graph**
» [Dr. Paul Feit](#)

4:15pm **#057-N Category Theory or How to Talk Easily about Hard Things**
» [Dr. Paul Feit](#)

5pm **Posters-Anthropology (P1-P7)**
COB 1st/2nd Floor Hallways

P1-U Evaluating bone strength in press-fit versus cement-fit arthroplasty via micro-CT

» Theresa de Cree, [James Myrick](#), Dr. Daniel Wescott

P2-G Can low-resolution imaging be used to assess living activity level in skeletal remains? A comparison of imaging modalities using the Texas State Donated Skeletal Collection (TXSTDSC)

» [ChristiAna Dunham](#), Dr. Elaine Chu

P3-U Evaluation Of Sunscreen Properties Of Ancient Maya Body Paints

» [Jessi Loyd](#)

P4-U The importance of projectile trauma analysis training for undergraduate students

» [Javier Garcia](#), Theresa de Cree

P5-G Forensic analysis of hacksaw paint transfer in dismemberment

» [Muthoni Thuku](#), Sanjib Thapa, Dr. Rizalia Klausmeyer, Rohil Kayastha, Dr. Bernd Zechmann, Dr. Zhenrong Zhang, Dr. Joseph Ferraro

P6-U Recognizing Intimate Partner Violence in Forensic Anthropological Trauma Analysis: A Literature Review

» [Sara Medeiros](#)

P7-G Osteometric Measurements for Reassociating and Pair-Matching of Commingled Tali and Naviculars

» [Susanna Jones](#)

5pm **Posters - Biomedical Science (P8-P18)**

COB 1st/2nd Floor Hallways

Chaired by: Dr. Joni Ylostalo

P8-U Gene Expression Changes in Parkinson's Disease

» [Serena Ylostalo](#), Dr. Joni Ylostalo

P9-G Enhancing Monascus pigments production and application as a natural alternative to sodium nitrite in pork sausages compared with traditional food colorants.

» [Lakshmi Devi Chittepu](#), Minji Jang, Behiye Ebru Sahiner, Krithika Maki, Boluwatife Ajayi, Dr. Md Ariful Haque, Dr. Md Abdur Razzak, Dr. Hye Kim, Dr. Wesley Osburn, Dr. Mathew Taylor, Dr. Seockmo Ku

P10-U Optimization of PVA, Ag Hydrogels: Effects of Heating and Freeze Thaw Crosslinking on Antibacterial Activity Against E. coli

» [Ethan Yager](#), Dr. Milka Montes

P11-G Diversity and Prevalence of Non-Tuberculosis Mycobacteria in Texas

» [Maritza Estrada](#), Dr. Jennifer Honda, Dr. Joshua Banta



Continued from Friday, 27 February

P12-U Pedigree of a Rare Variant of the MYH7 Gene Associated with Cardiomyopathy

» [Danielle Felice Galon](#), Pheben Abebe, Dr. Joshua Brokaw

P13-U Screening Compounds for their Potential to Inhibit Growth of Leukemia cells (Molt-4)

» [Iiya Desai](#), Tina Prajapati, Dr. Rachna Sadana

P14-U Discovering potential inhibitors of New Delhi metallo- β -lactamase 1 (NDM-1) using Computational Docking

» [Laura Jung](#), Dr. Josh Beckham

P15-U Evaluation of Cranberry-Loaded Hydrogels for Antibacterial Activity

» [Shayna Oliver](#)

P16-H The Impact of BT2-Modulated BCAA Reduction as a Novel Therapeutic for Alzheimer's Disease

» [Shriya Sreeju](#), Tanisha Makam, Lara Makkapati

P17-U Exploring natural anti-microbial and anti-virulence compounds with their mechanism of actions to combat drug-resistant pathogens

» [Nathaniel Pyenta](#), Dr. Santosh Kumar

P18-H Inhibitron-LC - A Novel Multitarget Drug with Nanoparticle Precision for Triple-Negative Breast Cancer

» [Nikila Swaminathan](#)

5pm

Posters - Cell and Molecular Biology (P19-P44)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Adriana P. Visbal, PhD

P19-U Regulation of RumAB Mutagenic Activity by the Putative R391 Lon Protease

» [Caleb Hammons](#), Dr. Martín González

P20-U Role of DENN Domain-Containing Protein 5b (dennd5b) During Early Embryonic Development of Zebrafish

» Khaled Mohamed Nassar, [Alicia Mendoza](#), Magdalen Marston, Andre Gil, Dr. Sharmin Hasan

P21-U Discovery of potential novel inhibitors of Mycobacterium tuberculosis InhA (MtInhA) with virtual screening

» [Shriya Mukkavilli](#), Dr. Josh Beckham

P22-U Novel DKNR Compounds Inhibit Proliferation in Triple-Negative Breast Cancer Cell Line

» [Ashley Espinoza](#)

P23-H Validating the Specificity of Novel Primers for a Biofilm Study

» [Shijay Sivakumar](#), Dr. Athenia Oldham

P24-U Formin Binding Protein 1l (fnbp1l) plays an important role during early embryonic development of zebrafish (Danio rerio)

» Ty Franklin, [Michael La Fontaine](#), Alicia Mendoza, Dr. Sharmin Hasan

P25-U CUDC-970 induces epigenetic reprogramming and AKT dephosphorylation in peripheral T-cell lymphoma

» Braden Samples, Alex Rodmanac, Marco Maples, Sophia Myers, Adam Chaudhary, [Dr. Mamta Gupta](#)

P26-U Requirement of Hippo signaling for larval crawling muscle development in Drosophila.

» [Kevin Hernandez](#)

P27-G An Expressional and Functional Study of PDZ and Lim Domain Paralogs in Danio rerio

» [Andre Gil](#), Alicia Mendoza, Dr. Sharmin Hasan

P28-U New Protocol for Genotyping Casper Zebrafish Mutants Using RT-PCR in a University Genetics Course

» [Pheben Abebe](#), Danielle Felice Galon, Dr. Joshua Brokaw



Continued from Friday, 27 February

P29-U Screening Synthetic Compounds for Impact on Cell Viability of Pancreatic Cell Line

» [Vivian Do Nguyen](#), Tina Prajapati, Dr. Rachna Sadana

P30-U Calibration matters: Refining protocols for reliable dose-response data

» [Noah Dyson](#)

P31-G Expression and Functional Analysis of MTSS2 Isoforms (mtss1la/mtss1lb) During Early Embryonic Development in Zebrafish

» [Danielle Duncan](#), Braulio Sandoval, Andre Gil, Samira Alam, Alicia Mendoza, Amira Manry, Dr. Sharmin Hasan

P32-U Evaluating Synthetic Compounds for Inhibition of Cell Proliferation in Lung Cancer Cell Line

» [Hurriel Bautista](#), Dr. Rachna Sadana, Tina Prajapati

P33-G The protective role of oncomodulin from stress induced mitochondrial damage in auditory cells

» [Janith Halpage](#), Dr. Santha Ranganathan, Dr. Dwayne Simmons

P34-U Dimethyl Terephthalate Effects on Adipogenesis in an OP9 Cell Model

» [Gustavo Zamora](#), Klarissa Martinez, Prof. Jennifer Heitmeyer, Dr. Danielle Grove

P35-U Post-translational Regulation of the MucA α B Error-Prone DNA Polymerase

» [Paige Djurdjevic](#), Dr. Martín González

P36-U Troubleshooting GSK3 β Purification and Optimizing Virtual Screening for Inhibitor Discovery

» [Xiya Chen](#), Saikrishna Gundlapalli, Dr. Josh Beckham

P37-U The Adipogenic Effects of Butylparaben on OP9 Mouse Cells

» [Natalie Osina](#), Caitlin Roach, Prof. Jennifer Heitmeyer, Dr. Danielle Grove

P38-U Effects of p-Phthalate Dimethyl Terephthalate on OP9 Mouse Mesenchymal Stem Cells

» [Klarissa Martinez](#), Gustavo Zamora, Prof. Jennifer Heitmeyer, Dr. Danielle Grove

P39-U OP9 Mouse Stem Cell Differentiation When Treated With Two Specific Types of PFHxS (PFAS)

» [Ryan Trevino](#), Nicole Bloodgood, Prof. Jennifer Heitmeyer, Dr. Danielle Grove

P40-U Microbiological Determination of Folate in Fermented Asparagus Using HPLC

» [Sanjana Rachala](#)

P41-U Differential Gene Expression in Human Bronchial Cells after Exposure to 3D-printer Emitted Aerosols

» [Dominic Pruss](#), Mahmud Shojiv, Taylor Jefferis, Dr. Jon Beard, Charli Worth, Dr. Joseph Taube, Dr. Mary Lauren Benton, Dr. Christie Sayes

P42-U Assessing the Adipogenic Effects of 1H,1H,2H,2H-PFHxS and PFHxS Using the OP9 Mouse Cell Line

» [Nicole Bloodgood](#), Ryan Trevino, Prof. Jennifer Heitmeyer, Dr. Danielle Grove

P43-G Visualizing Non-Centrosomal Microtubule-Organizing Centers in Drosophila Muscle Using Fluorescent Tools

» [Cody Griffin](#), Dr. Mardelle Atkins

P44-U The microtubule network is altered prior to cachexic wasting in a Drosophila larval model

» [Chrislynn Harris](#), Dr. Mardelle Atkins

5pm

Posters - Chemistry & Biochemistry (P45-P73)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Darrell Fry



Continued from Friday, 27 February

P45-U Impact of azadiradione on DNA oxidation

» [Julia Jurewicz](#), Mariah Saenz, Dr. Mary Brintha Croos

P46-U Improving temperature control for myoglobin oxidation kinetic studies

» [Eva Zohne](#), Nwankwo U. Dickson, Zechariah Hall, Destini Eidman, Dr. David E. Thompson

P47-U Discovering Novel Inhibitors for 3-Oxoacyl-(Acyl-Carrier-Protein) Reductase (FabG) in Plasmodium falciparum

» [Sam Vargas](#), Dr. Josh Beckham

P48-U Comparing Dynamics of Fermentation and Probiotic Properties with American Kimchi

» [Justy Chung](#), Jaius Wenzel, Sehyeon Song, Dr. Seockmo Ku

P49-U Shifting Geometries: Octahedral Geometry and Electron Count Affect Electronic Communication

» [Jordan Ruppert](#), Dr. John Gary

P50-U Biochar Production Through Microwave Pyrolysis: A Study of the Structure of Activated Carbon and Graphite Carbon.

» [Jemima Estrada](#), Jessica Villarreal

P51-U The Use of Microwave-Promoted Heating in an Undergraduate Organic Lab Activity: The Cannizzaro Reaction

» [Hayden Tolbert](#), Dr. Russell Franks

P52-U Exploring thermal selectivity for portable SERS-based methamphetamine detection in soil

» [Michaela Henson](#), Alicia Cortez, Samantha Martinez, Chizzy Obietikponah, Dr. David E. Thompson

P53-U Reflective Analysis of Inorganic Pigments

» [Clayton Engler](#), Holdin Price, Dr. Corey Thompson

P54-U Pharmaceutical Contaminant Analysis in the Nacogdoches Wastewater Treatment Process using SPE-UHPLC-MS/MS

» [Brandon Lovell](#), Dr. Kefa Onchoke, Dr. Mike Ojemaye, Dr. Michael Janusa, Kadin Green, Dr. Jamie Humphries

P55-U Thermally-controlled bypass valves for selective SERS detection of methamphetamine in soil

» [Samantha Martinez](#), Alicia Cortez, Michaela Henson, Chizzy Obietikponah, Dr. David E. Thompson

P56-U GC-MS Analysis of Castor Oil

» [Anthony Ramos](#), Dr. Darrell Fry

P57-U Fluorescent polarization is superior to BIOMOL® for measuring RecA binding affinity

» [Emma Scott](#), Dr. Robert Moore

P58-U Analysis of contaminant metals in tampons and evidence for metal mobility

» [Sage Bartlett](#), Naomi Moody, Dr. Alison Bray

P59-U Green Synthesis of a Cross-linked Polymerized Hydrogel Containing NDGA-Capped Gold Nanoparticles for Skin Lesion Treatment

» [Areej Khodair](#), Dr. Milka Montes

P60-U Pyranone Generation By Way of Substituted Oxetanes

» [Denali Rubio](#), Dr. Michael Ruane, Sheldon Peters

P61-U Phytochemical Modulators of Cancer Metabolism: Docking Analysis of Flavonoid Interactions with 6-Phosphogluconate Dehydrogenase

» [Alicia Trejo](#), Thanh Tien Dao, Georgetta Zuo, Dr. Bidisha Sengupta

P62-U Flavoring chelation properties influence the quantity of metals in vaping aerosols

» [Anna Perez](#), Dr. Clancy Collom, Dr. Gregory Smith



Continued from **Friday, 27 February**

P63-U Investigation of Naturally Fluorescent Materials Using Fluorescent Microscopy

» [Ian Cortez](#)

P64-U Tuning Hydrogen Bonding for Designing Colorimetric Sensor for Heavy Metals

» [Andrew Do](#), Prof. Rashid Mia, Jack Weeks

P65-U Delta-8 or Delta-9? Testing the Truth Behind THC Gummies

» [Abby Henderson](#), Dr. Dennis Gibson

P66-G Innovative and Timely Cell-Free Assays: A Novel Approach/ Methodology in Toxicity Testing

» [Sabrina Shahjabeen Alam](#), Dr. Christie Sayes, Dr. Amanda Charlton-Sevcik

P67-U Utilizing Free Fatty Acids to Inhibit Bacteria in Eyedrops

» [Bethany Blair](#), Bailey Nobles

P68-U Investigating Various Deep Eutectic Solvent Solutions in Chitin Extraction

» [Addysage Seay](#), Dr. Dennis Gibson, Dr. Philips Agboola

P69-U Virtual Screening-Driven Identification of Inhibitors Targeting MtFabG in Mycobacterium tuberculosis

» [Manal Saad](#), Mahdia Rahman, Sharon Rong, Dr. Josh Beckham

P70-U PEG-BSA hydrogels: release and diffusion studies

» [Averi Felan](#), Jenna Slussler, Dr. Jacques Jean-Francois

P71-U Are FTIR and mass changes a good way to determine the degradation of plastics?

» [Kirstin Van Nostrand](#)

P72-U Redox-Sensitive GFP to Monitor the Impact of Carbon Monoxide on Cellular Redox Status in Saccharomyces cerevisiae

» [Jessica Villarreal](#), Dr. Nin Dingra

P73-U Discovering novel inhibitors of D-alanine D-alanine ligase in Yersinia pestis

» [Raina Patel](#), Mahitha Simhambhatla, Dr. Josh Beckham

5pm

Posters - Conservation Ecology (P74-P81)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Wendi Wolfram

P74-U Foraging Responses of Hummingbirds to Nectar Concentration in an Andean Cloud Forest

» [Mercy Nnaeme](#), Andres Vasquez, Dr. Mark Brown, Dr. Joshua Banta

P75-U Comparison of Bird Species in Various Habitats in Weston Ranch

» [Natalie Garcia](#)

P76-G Investigating the Conservation Statuses of Native Texas Crayfish Species Through Distribution Analysis and Ecological Niche Modeling

» [Ms. Elizabeth Croft](#), Jared Dickson, Dr. Archis Grubh, Dr. Ryan Shartau, Dr. Joshua Banta

P77-G Aggregation and collation of Texas crayfish museum specimens to determine their current conservation statuses

» [Adrian Alvarez](#), Dr. Archis Grubh, Dr. Joshua Banta, Dr. Ryan Shartau

P78-G Environmental tolerances and habitat association of three critically imperiled crayfish species in Texas

» [Andy Walker](#), Dr. Ryan Shartau, Dr. Joshua Banta

P79-N Resilient Biodiversity: Guadalupe River Flooding Update

» [Dr. Chris Distel](#)



Continued from Friday, 27 February

P80-U Utilization of an eDNA ddPCR assay on two SGCN mayfly species.

» [Jace Douglas](#), Matthew Blow, James York, Marsha Williams, Dr. Archis Grubh, Dr. Lance Williams, Dr. Matt Greenwold

P81-G Life histories of two SGCN Procambarus Species in East Texas

» [McKenzie Adkins](#), Matthew Blow, Katrin Kellner, Dr. Matt Greenwold, Jared Dickson

5pm

Posters - Freshwater Science (P82-P88)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Mary Kay Johnston

P82-U Playing by the numbers: Comparing microplastic estimates from summation and extrapolation

» [Sarah Berver](#), Emma Flores, Jordan Emerson, Dr. Romi Burks, Andre Felton

P83-U Thermal Sensitivity Patterns in Urban and Rural Austin Streams

» [Jaalah Shand](#), Amber Clark, Dr. Mary Poteet

P84-G Spatiotemporal analysis of metazoan community from the subterranean estuaries of the Yucatan peninsula and Cozumel island through metagenomics

» [Danielle Bragg](#), Dr. Elizabeth Borda, Dr. Fernando Calderón-Gutiérrez

P85-U Phenotypic Diversity of Escherichia coli from Water Samples in North and East Texas

» [Christian Buford](#), Wei-Chin Ho

P86-U Using Grass Shrimp to Evaluate Mercury Concentrations of Texas Lake Systems

» [Robert Albin](#), Dr. T.J. Boyle

P87-U Assessing white bass (Morone chrysops) population characteristics in two central Texas lakes across season and size classes

» [Yessenia Edgecomb](#), Caroline Vanderburg, Mervin Narito, Caleb Fry, Dr. Jason Locklin

P88-U Signs of Decline in Texas? Zebra Mussel Population Density and Condition Across Invasion Timelines

» [Kaylyn Wolf](#), Mervin Narito, Peyton Sen, Dr. Jason Locklin

5pm

Posters - Geoscience (P89-P92)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Michael Read

P89-U Visualizing the First Flush Temperature Effect in Austin, Texas

» [Rhianna Saini](#), Dr. Mary Poteet

P90-U Characterizing the K-Pg Boundary in Central Arkansas, USA

» [Matthew Smith](#), Dr. Mindy Faulkner

P91-G Evaluating Sulfate-Reducing Potential of Native Wetland Plant Species in a Coal Ash Disposal Area, Panola County, Texas, USA

» [Cari Mitchell](#), Dr. Mindy Faulkner, Dr. Jenny Rashall

P92-U Insights into the Large Mammal Fossils from Phillips Paleo Cave, Crockett County, Texas

» [Angelica Reyes](#), Stacie Skwarcan

5pm

Posters - Marine Science (P93-P99)

COB 1st/2nd Floor Hallways

Chaired by: Annie Mowry

P93-U Staging the embryogenesis of male-pregnant Gulf pipefish (Syngnathus scovelli) using optic development.

» [Kimble Gould](#), Aniston Lovetinsky, Dr. Sunny K. Scobell



Continued from Friday, 27 February

P94-U Characterizing embryonic development in the pregnant male pipefish, *Syngnathus Scovelli*, using snout formation as a morphological marker

» [Aniston Lovetinsky](#), Kimble Gould, Dr. Sunny K. Scobell

P95-U A Longitudinal Study: The Abundance and Disease Status of Starlet Corals in Roatán, Honduras

» [Gloria Dominguez](#), Ashley Tejada, Kaylee Aguilar, Xaile Garza, Ana Quintinilla, Leon Rosales, Annie Mowry, Ashlyn Kennedy, Matthew Hicks, Racheal Gomez, Traesha Robertson, Stephanie Randell, Dr. Stephanie Lockwood, Jacqueline Dove

P96-U The Role of Symbiodiniaceae Identity in Mediating Pathogenic Bacterial Effects on Exaaptasia

» [Emily Ryan](#), Dr. Tanya Brown

P97-U Echinoderm Diversity in Roatán, Honduras

» [Anna Contreras](#), Yuto Goto, Harrison Wolf, Sarah Lucas, Hannah Kaye Windwehen, Traesha Robertson, Annie Mowry, Ashlyn Kennedy, Jacqueline Dove, Dr. Stephanie Lockwood, Stephanie Randell

P98-U Association of Diversity and Health of Scleractinian Corals with Macroalgae in Roatan, Honduras

» [Hannah Dawson](#), Zoe Hilliard, Harrison Wolf, Christopher Allovio, Traesha Robertson, Anne Mowry, Ashlyn Kennedy, Jacqueline Dove, Dr. Stephanie Lockwood, Stephanie Randell

P99-U Associations of algal species with sponge disease in Roatán, Honduras

» [Paola Vallejo](#), Virginia Fuentes, Grettel E. Ramirez, Traesha Robertson, Annie Mowry, Ashlyn Kennedy, Jacqueline Dove, Dr. Stephanie Lockwood, Stephanie Randell

5pm

Posters - Mathematics & Computer Science (P100-103)

COB 1st/2nd Floor Hallways

Chaired by: Todd Dole

P100-U MoRocco – A Secure Exam Operating System for Academic Integrity

» [Rocco Guevara](#)

P101-U Comparing the Effectiveness of Two Common Lichen Sampling Methods

» [Courtney Shuman](#), Prof. Chad Cryer, Martha Hartt

P102-U GRACE – Gesture Recognition for Augmented Cultural/Religious Expression

» [Daniil Kochkonbaev](#)

P103-H Q-Safe: Mitigating Quantum Threats with Lattice-Based Cryptography

» [Nikhitha Swaminathan](#)

5pm

Posters - Neuroscience (P104-P114)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Seena Mathew

P104-U Location of AVT neurons within the seahorse and pipefish pituitary

» [Rachel Ling](#), Dr. Sunny K. Scobell

P105-G Assessing Cell Death in a 6-Hydroxydopamine Zebrafish Model

» [Yushe N Islam](#), Roha Qureshi, Nolawit Tilahun, Dr. Ayman Hamouda, Dr. Brent Bill

P106-U An analysis of the dopaminergic pathway in the brain and pituitary of male-pregnant pipefish and seahorses

» [Madeleine Thomas](#), Dr. Sunny K. Scobell

P107-G Exploring the Role of Angiotensin Receptor Blockers in the Management of Traumatic Brain Injury: A Review of Mechanisms and Therapeutic Potential

» [Manaal Salman](#), Kayley Stroupe, Dr. Lora Talley



Continued from Friday, 27 February

P108-U Investigating AHDC1 Loss and Retinal Development in a Zebrafish Model of Xia-Gibbs Syndrome

» [Adedire Owulebaja](#)

P109-G Prefrontal Transcranial Photobiomodulation in Autism Spectrum Disorder: Cognitive, Behavioral, and Neurophysiological Effects Across Age Groups

» [Sarah Diaz](#), Hunter Dutkiewicz, Dr. Gabriela Guimaraes, Nicole J. Moore, Isabelle Rose, Dr. Douglas Barrett, Dr. F. Gonzalez-Lima

P110-U Investigation of the role of Drosophila gene CG12299 in the circadian controlled locomotive activity in fruit flies

» [Annie Trinh](#), Aimalohi Edeghere, Dr. Yuan Yuan Kang

P111-U Blueprints of the Brain: Fetal Cortical Development and the Shadow of Gestational Diabetes

» [Riya Jadeja](#)

P112-G Effects of Repeated-Session Transcranial Photobiomodulation on Prefrontal Oxygenation and Impulse Control in Adults with Attention-Deficit/Hyperactivity Disorder

» [Farzad Salehpour](#), Dr. Patrick O'Connor, Dr. Douglas Barrett, Isabelle Rose, Ayla Farzamia, Monique Tran, Amir Emamian, Haeun Yeo, Dr. F. Gonzalez-Lima

P113-U Investigation of the role of Drosophila gene polyhomeotic proximal in the circadian controlled locomotive activity in fruit flies

» [Pedro Rodriguez Navarro](#), Dr. Yuan Yuan Kang, Delwin Sunil

P114-U Antidepressants and Lung Toxicity: A Narrative Review

» [Ariana Azimi](#), Elakiya Jayaramen

5pm

Posters - Physics & Engineering (P115-P116)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Bryant Wyatt

P115-H Can Deep Learning Models Trained on Cosmological Simulations Predict the Signatures of Early Supermassive Black Hole Seeds Formation Scenarios?

» [Hitaishi Chillara](#), Dr. Ryan Farber

P116-U Using 3D Printing in a Research Lab

» [Montserrat Menchaca](#), Dr. Rosa Cardenas, Ileana Lane

5pm

Posters - Plant Biology (P117-P127)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Kevin Eddy

P117-U Under the Soil: Effects of Diquat Herbicide on Tomato Root Complexity and AM Fungi Symbiosis

» [Michaela Stelzer](#), Annabel Ferniza, Dr. Honey Golden

P118-U Heat stress response in Sorghum halepense: tolerance decreases with exposure time but is consistent across seasons

» [Ashley Cantu](#), Mandy Payan, Daniel Odejimi, Dr. Michael Tobin

P119-U Modest increase in photosynthetic heat tolerance occurs across leaf developmental stages in Johnson Grass (Sorghum halepense)

» [Mary Robles](#), Diana Diaz, Jacqueline Cervantes, Shaimaa Obaid, Dr. Michael Tobin

P120-U Heat-induced ion leakage curves similar across leaf developmental stages in Johnson grass (Sorghum halepense)

» [Daniel Odejimi](#), Mandy Payan, Ashley Cantu, Jacqueline Cervantes, Dr. Michael Tobin

P121-U Sanger sequencing of microsatellite loci to characterize contributions of non-tandem indels to allelic diversity in Mentzelia pectinata.

» [Hannah Anthony](#), Ana Rodriguez, Dr. Joshua Brokaw

P122-U Using database searches and new collections to document the floristic diversity of the Independence Creek Preserve, TX

» [Olivia Fischer](#), Edmundo Avalos, Matt Allen



Continued from Friday, 27 February

P123-U Revisiting Zygnema: assessing diversity and systematics using publicly available sequence data

» [Montserrat Alvarez](#), Dr. Anna Crowell

P124-U The use of the rbcL gene to identify relationships among Nitzschia palea strains (Bacillariophyceae)

» [Ambivalencia Bonilla Love](#), Dr. Anna Crowell

P125-U Understanding Evolutionary History Within Genus Amphora Using the rbcL Gene

» [Justino Gonzalez](#), Dr. Anna Crowell

P126-U Phylogenetic relationships among Sheathia species (Batrachospermales, Rhodophyta)

» [Alfredo Aldana Lopez](#), Dr. Anna Crowell

P127-G Potential for Acorn Morphometric Analysis in Quercus Identification

» [Zoe Matranga](#), Dr. Juan Daza

5pm

Posters - Science Education (P128-P137)

COB 1st/2nd Floor Hallways

Chaired by: Woody Cox

P128-N AI/VR Digital Twin Prototypes for Supply Chain Operations Education

» [Dr. Maria Burns](#), Dr. Suresh Kumar Peddoju

P129-U Improving Math Readiness for General Chemistry Through the Development of an Online Bootcamp

» [Alfonso Lena Ordaz](#), Ariyana Fisher, Lindsey Niehof, Dr. Lance English

P130-U Bringing Biochemistry into Organic Chemistry through an LLPS-Based CURE Module

» [Lila O'Donnell](#), Lindsey Niehof, Ariyana Fisher, Luis Rodulfo, Steven Whitten, Dr. Lance English

P131-G Engineering Lassi by Exploring How Common Ingredients Shape Fermentation and Quality

» [Haran Prasad](#), Dr. Hye Kim, Dr. Md Ariful Haque, Dr. Jaehyun Ahn, Dr. Seockmo Ku

P132-U From Concept to Cosmos: Cultivating The Next Generation of Our Future Space-STEM Workforce

» [Brett Jacobsen](#)

P133-U Creek to classroom: Exploring biodiversity through hands-on ecological investigation

» [Edmundo Avalos](#), Dr. Matthew Allen

P134-U Enhancing STEM Education Through Micro-Credentialing: Fostering Instrument Proficiency and Career-Ready Skills

» [Corey Hobbs](#), Dr. Darrell Fry

P135-U Cost-Effective Spectrophotometry for K-12

» [Victoriano Cooper](#), Dr. Dennis Gibson, Bobby Womack, Dr. Wade Ashby

P136-G Girl Scout STEM Education and Engagement through Field Activities

» [Kendall Kinsey](#), Dr. Steven Koether, Dr. Diane Neudorf

P137-N Bridging the AI Literacy Gap: STEM Student Perspectives on Artificial Intelligence in Higher Education

» [Dr. Wendi Wolfram](#), Liz Fitzgerald, Dr. Shama Grimmage, Dr. Jenna Odeh, Dr. Josh Lackey, Naseeba Abdeljaber

5pm

Posters - Systematics & Evolutionary Biology (P138-P150)

COB 1st/2nd Floor Hallways

Chaired by: Dr. Matt Greenwold



Continued from Friday, 27 February

P138-U A Taxonomically and Ecologically Diverse Marine Vertebrate Assemblage at the end of the Cretaceous in Texas (USA)

» [Kieu Nguyen](#), Dr. Thomas Stidham

P139-U Examining the survival and initial recovery of fish after the Cretaceous mass extinction of the Kincaid Formation in Texas.

» [Diana Kettler](#), Emma Potts, Dr. Thomas Stidham

P140-U Morphological differences in among populations of Amphisbaenians from Puerto Rico

» [Minji Kim](#), Dr. Juan Daza, Oscar Ospina, Camilo Linares-Vargas

P141-U Comparative study of male aggression of food generalists and specialists in Drosophila species

» [Yuliana Santos Ventura](#), Abdulrahman Omar, Laurie Neuman, Dr. Yuan Yuan Kang

P142-U Spontaneous Mutations on Antibiotic Resistance in Escherichia coli

» [Julian Ramirez](#), Brent Orji, Christian Buford, Natalie Zarate, Wei-Chin Ho

P143-U Fungal Genotyping and Phylogenetic Categorization of Lower Attine Ants Cyphomyrmex wheelri and Mycetosoris hartmanni

» [Lunden Hahn](#), Erin McFarland, Dr. Jon Seal, Katrin Kellner

P144-U The Effects of Historical Adaptation of Microbes in New Stressful Environments

» [Ivan Mendez](#), Kingsley Amoateng, Sora Kim, Julian Ramirez, Natalie Zarate, Wei-Chin Ho

P145-G Resolving the Sphaerodactylus macrolepis species complex in the Puerto Rican bank

» [Lilly Nguyen](#), Dr. Juan Daza, Dr. Alexandra Herrera Martinez

P146-U The role of Trachymyrmex smithii ants in structuring bacterial communities in their symbiotic fungus gardens

» [Sorrel Estrada](#), Erin McFarland, Katrin Kellner, Dr. Jon Seal

P147-U Quantitative Trait Locus mapping and functional validation of genes regulating circadian controlled locomotion in Drosophila species

» [Delwin Sunil](#), Dr. Yuan Yuan Kang, Benjamin Soibam, Pedro Rodriguez Navarro, Isabela Rodriguez Avila

P148-G Comparing cranial telescoping in select squamate groups

» [Paige Donkers](#), Dr. Juan Daza

P149-G The Fungal Microbiome of Pheidole adrianoi, an ant that associates with mycorrhizae

» [Erin McFarland](#), Dr. Jon Seal, Katrin Kellner

P150-U Assessing Male Mating Success Across Proto-Y Genotypes in Musca domestica

» [Juan Fuentes](#), Alexis Hernandez, Lotus Ha, Landon Sanz, Tania Barcenast

5pm

Posters - Terrestrial Ecology & Management (P151-P164)

COB 1st/2nd Floor Hallways

Chaired by: Eli Hartung

P151-U Effects of stemflow on lichen: Does the way in which water runs off tree bark influence lichen distribution

» [Mario alvarez](#), Prof. Chad Cryer

P152-G Diet and parasites of newly documented Hemidactylus from south Texas, USA

» [Kevin Green](#), Dr. Drew Davis

P153-U Investigating Post-Prandial Thermophily in a Fossorial Snake Species

» [Julian J. Villanueva](#), Dr. William I. Lutterschmidt



Continued from **Friday, 27 February**

P154-U Seasonal occurrences of mammals in Natchitoches parish Louisiana

» [Blake Willey](#), Prof. Chad Cryer

P155-U Influence of ultraviolet light on the distribution of fluorescent lichen

» [Caleb Smith](#), Layla Salina, Jordan Whittaker, Prof. Chad Cryer, Ignacio Alderete

P156-U Arachnid Diversity at Firebase Libby and Callahan County

» [Jacob Wooten](#), Dr. T.J. Boyle

P157-G The Impact of Social Isolation on Madagascar Hissing Cockroaches

» [Asmau Shiyanbade](#), Dr. Diane Neudorf, Dr. Sibyl Bucheli

P158-U Influence of tree bark pH on lichen distribution

» [Alicia Hawkins](#), Prof. Chad Cryer, Jada Gosey, Cyah White, Ruby Tapia

P159-U Nest Density of *Atta texana* in a Temperate East Texas Forest

» [Megan Rhea](#), Erin McFarland, Dr. Jon Seal

P160-U Are they Fools, or Will they Learn? Behavioral adaptation in *Physarum polycephalum*

» [Ella Johnson](#), Hannah Loya, Samuel De La Garza, Dr. Mary Kay Johnston

P161-U Nasal botfly prevalence in the 2025 hunting season of white-tailed deer

» [Tyler Miller](#), Prof. Chad Cryer

P162-N Composting Polystyrene Using Superworms: Some Practical Applications

» [Tara Hansler](#), Dr. Richard Patrock

P163-U Distribution of UV+ lichens on various tree species in Central Texas

» [Jacquelyn Rios](#), Prof. Chad Cryer

P164-U Seed predation differs between native and exotic seed species, and across a latitudinal gradient

» [Ana Caballero](#), Sage Gruver, Charlotte Savage, Yahida Soto, Will Bieker, Dr. Lana Bolin

Saturday, 28 February

7am

Fellows' & Past Presidents' Breakfast

COB 350.55

8am

Registration

College of Pharmacy (WTB) - Outside 134

8am

Cell and Molecular Biology (8am-10:30am) & Section Meeting (10:30am-10:45am)

COB 111

Chaired by: Dr. Adriana P. Visbal, PhD

8am

#058-U Finding Novel Inhibitors of Francisella tularensis Enoyl-ACP reductase FabI (FtFabI) in Francisella tularensis

» [Yiming Chen](#), Dr. Josh Beckham

8:15am

#059-U Cancer Stem Cells as Mitochondrial Donors: Implications for Macrophage Polarization and Tumor Immune Evasion

» Nicholas Pascuzzi, [Luke Peck](#), Chris Uliberri, Diya Shah, Dr. Kuan-Hui Ethan Chen

8:30am

#060-U Investigating The Formation and Biological Impact of Oxysterol-RNA Adducts in *Drosophila Melanogaster*

» [Tyson Windham](#), Miriam Andersen, Zoey Storch, Dr. Godwin Ifere



Continued from **Saturday, 28 February**

- 8:45am **#061-U Screening TZ62, TZ70, TZ71 and DKNR8, DKNR10, DKNR13 for Induction of Apoptosis and Inhibition of Metastasis**
» [Maximiliano Perez](#), Tina Prajapati, Dr. Vaishali Chaubal, Dr. Rachna Sadana
- 9am **#062-G Exploring the Role of Lung cancer-associated Variants and Genes in DNA Damage Promotion**
» [Maryam Vaziripour](#), Daniel Snyder, Christopher Amos, Yanhong Liu, Dr. Jun Xia
- 9:15am **#063-G Fibroblast Lineage Remodeling in Uterine Blood Reveals a Conserved Protumorigenic Trajectory in Endometrial Cancer**
» [Bingru Feng](#), Dr. Jun Xia, Dr. Yusi Fu
- 9:30am **#064-G PAX6 in Mechanosensory Neuromasts of Salamanders and Zebrafish: A Molecular, Microscopic, and Computational Investigation**
» [Nisa Sindhi](#), Nikhil Pawar, Dr. Ruben U. Tovar, Dr. Thomas J. Devitt, Dr. David M. Hillis, Dr. Dana M. Garcia
- 9:45am **#065-G Expression and Functional Analysis of Profilin Genes (pfn1, pfn2a, pfn2b) During Early Embryonic Development in Zebrafish**
» [Samira Alam](#), Andre Gil, Alicia Mendoza, Dr. Sharmin Hasan
- 10am **#066-N Three left standing: Population wide investigation of histone missense mutation landscape reveals novel constraint pattern**
» [Tiffany Bastos](#), Dustin Fetch, Dr. Wan Song, Natalie Redding, Marzieh Rouzbehani, Ava George, Ksenia Dydo, Juliannah Rua-Avendano, Gauri Raje, Dr. Alexey Soshnev
- 10:15am **#067-N Androgen regulation of the reproductive cycle in male-pregnant pipefishes**
» [Dr. Sunny K. Scobell](#)

- 8am **Chemistry & Biochemistry II (8am-11:15am) & Section Meeting (11:15am-11:30am)**
COB 112
Chaired by: Dr. Darrell Fry
- 8am **#068-U Ripe for Discussion: The Curious Case of Fungus on Wine Grapes and What It Means for Our Palates**
» [Zachary Dennison](#), Dr. Alyx Frantzen
- 8:15am **#069-U Redox Cooperativity Analysis with Computational Chemistry: Role of 3d Versus 4d/5d Metals**
» [Hadley Watts](#), Dr. John Gary
- 8:30am **#070-U The Grapes of Wrath: How to Store Wine Without Letting It Go Bad (and Other Oenological Adventures)**
» [Evelyn Crowe](#), Dr. Alyx Frantzen
- 8:45am **#071-U Protective Effects of Mint Extracts Against Oxidative Stress in Human Serum Albumin Protein**
» [Perla Tovar](#), Nkeiruka Aziekwu, Dr. Bidisha Sengupta
- 9am **#072-U Mechanistic Insights into Transition-Metal Binding to HSA Using Dual-Probe UV-Vis and Site-Specific Tryptophan Fluorescence Spectroscopy**
» [Tess Corbett](#), Dr. Bidisha Sengupta
- 9:15am **#073-U Structure-Based Identification of Inhibitors Targeting Staphylococcus aureus D-Alanine:D-Alanine Ligase Using Virtual Screening**
» [Mahdia Rahman](#), Makynzie Kitzmann, Manal Saad, Dr. Josh Beckham
- 9:30am **#074-U Occurrence and Quantitation of Microplastic Contamination of Wastewater Treatment Plants in Deep East Texas**
» [Jacob Swallow](#), Dr. Kefa Onchoke, Dr. Robert Friedfeld
- 9:45am **#075-U Camille: Automated Drug Screening at Scale**
» [Michael Gillman](#), Dr. Josh Beckham



Continued from **Saturday, 28 February**

- 10am **#076-U Coumarin-enamine Derivatized Cascade Fluorescent Sensor for Multianalytes**
» [Marlene Zepeta-Rodriguez](#), Prof. Rashid Mia, Jack Weeks
- 10:15am **#077-G Synthesis and Characterization of Thiazole-Based Cryptand-like Tricyclic Fluorescent Macrocyclic Cages for Aromatic Hydrocarbons**
» [Jack Weeks](#), Prof. Rashid Mia
- 10:30am **#078-N Occurrence and Quantitation of PFAS in biosolids collected from WWTPs in Deep East Texas**
» [Dr. Kefa Onchoke](#), Dr. Michael Janusa, Dr. Jamie Humphries, Kendal Fiffick, Anthony Broom, Thanh Tien Dao
- 10:45am **#079-N Mitochondrial membrane potential and mitophagy as modulators of light therapy**
» [Dr. Violet Bumah](#)
- 11am **#080-N Selective Recognition of G-Quadruplex and i-Motif DNA by Curcumin and Kaempferol: A Spectroscopic and Computational Study**
» [Dr. Bidisha Sengupta](#)
- 8:30am **Anthropology (8:30am-9:15am) & Section Meeting (9:15am-9:30am)**
COB 214
Chaired by: Ms. Stephanie Baker
- 8:30am **#081-G A Deep Learning Approach for Postmortem Interval Estimation**
» [Stephanie Baker](#)
- 8:45am **#082-G Investigating how heat, humidity, and solar radiation affect postmortem dental crack volume changes in human dentition**
» [Bec Krolczyk](#), Dr. Daniel Wescott, Dr. Elaine Chu, Dr. Nicholas Herrmann

- 9am **#083-G Investigating Pelvic Sexual Dimorphism in Japanese, American Hispanic, and American White Samples**
» [Madison Glenwinkel](#), Dr. Elaine Chu
- 8:30am **Freshwater Science (8:30am-10am) & Section Meeting (10am-10:15am)**
COB 212
Chaired by: Dr. Mary Kay Johnston
- 8:30am **#084-U Sticky Situation: Investigating eDNA and Microplastic Interactions**
» [Jordan Emerson](#), Heaven Eskandar, Emma Flores, Dr. Romi Burks, Dr. Matthew Barnes, Andre Felton
- 8:45am **#085-U Bobbing for apple snails: Detecting Pomacea maculata in San Antonio waterways using environmental DNA**
» [Heaven Eskandar](#), Emma Flores, Jordan Emerson, Dr. Romi Burks, Dr. Matthew Barnes, Adrian Reyna
- 9am **#086-N Status and Distribution of Freshwater Mussels in the Tensas River and Bayou Bartholomew of Louisiana**
» [David Ford](#), Dr. Neil Ford, Dr. Lance Williams
- 9:15am **#087-N On the observed inverse relationship between rainfall amount and dissolved mineral content**
» [Dr. John Stout](#)
- 10am **Geosciences (10am-11:15am) & Section Meeting (11:15am-11:30am)**
COB 214
Chaired by: Dr. Michael Read
- 10am **#088-U Evaluating the viability of Pennsylvanian conodont and brachiopod 87Sr/86Sr values from the Santa Fe Mountains, New Mexico**
» [Natalya Plourde](#), Dr. Michael Read



Continued from **Saturday, 28 February**

- 10:15am **#089-U A Re-evaluation of Morphological Characters Used to Identify Fossil Viperid Snakes in Neogene and Quaternary Deposits of the United States.**
» [Theodore Ransom](#), Christopher Bell
- 10:30am **#090-N Mid-Artinskian (Early Permian) conodonts and fusulinids from the "Wolfcamp B"- "Wolfcamp A" transition of the southern Midland Basin, West Texas**
» [Dr. Michael Read](#)
- 10:45am **#091-N Stratigraphic Analysis of the conglomeratic sandstone of Knight Canyon (Paleocene?), Grant County, New Mexico**
» [Dr. R. LaRell Nielson](#)
- 11am **#092-G Cultivating Mars: Testing Crop and Microbial Growth in Optimized Regolith Aboard the ISS**
» [Harrison Coker](#), Caleb Shackelford, Dr. Julie Howe
- 10:30am **Biomedical Sciences II (10:30am-11:45am) & Section Meeting (11:45-noon)**
COB 212
Chaired by: Dr. Joni Ylostalo
- 10:30am **#093-U Discovering Novel Inhibitors of Yersinia pestis 3-Oxoacyl-[Acyl-Carrier-Protein] Reductase (YpFabG) Using Comprehensive Virtual Screening**
» [Saumya Seth](#), Dr. Josh Beckham
- 10:45am **#094-G Investigation of the Pathogenesis of Bourbon virus at the Tick-Host-Virus Interface**
» [Megan Burch](#), Dr. Catherine Olal, Agnes Udoh, Dr. Dennis Bente
- 11am **#095-G Crimean-Congo Hemorrhagic Fever Virus Infection in Human and Animal Cell Lines: A Pathway to Understanding Species-Specific Pathogenesis**
» [Kiyah Costin](#), Dr. Catherine Olal, Dr. Anastasia Accoti, Megan Burch, Dr. Maria Cajimat, Dr. Dennis Bente

- 11:15am **#096-N Targeting aurora kinase, A and BRD4 as a translational therapeutic strategy for cutaneous T-cell lymphoma**
» [Dr. Mamta Gupta](#)
- 11:30am **#097-N Rapid recovery of peripheral oxygen saturation and hypoxic COVID-19 patients with ivermectin-based multidrug therapy**
» [Dr. Eleftherios Gkioulekas](#), Dr. Peter McCullough, Prof. Colleen Aldous
- 10:30am **Terrestrial Ecology & Management (10:30am-11am) & Section Meeting (11am-11:15am)**
COB 203
Chaired by: Eli Hartung
- 10:30am **#098-U Vocalization Signatures of Frog Species: A Study of Call Patterns for Species Identification and Biodiversity Monitoring in a Temperate Wetland Ecosystem**
» [Sunshyne Parrish](#), Dr. Joel Brant, Dr. T.J. Boyle
- 10:45am **#099-U Environmental impacts: how humidity and temperature affect the growth of Ophiomyces isolates**
» [Emilee Minor](#), Alan Lizarraga
- 12pm **Lunch**
COB 112
- 1pm **Graduate Student Oral Presentation Competition**
Robert R. Muntz Library (401)
Chaired by: Dr. Travis LaDuc
- 1pm **#001-GC Comprehensive insights into mosquito species diversity and habitat-specific host selection patterns in Cameron Park Zoo, Waco, Texas.**
» [Dhivya Rajamanickam](#), Dr. Jason Pitts
- 1:15pm **#002-GC Potential Disruptors of the Acoustic Habitat of the Carolina Wren and the Implications for Reproductive Isolation**
» [Zachary Seidel](#), Dr. Diane Neudorf



Continued from **Saturday, 28 February**

1:30pm **#003-GC The impact of nutrition on insecticide resistance and gene expression in *Aedes aegypti***
» Esmeralda Rosas, Sarah Maestas, Jason Tidwell, Dr. Christopher Vitek

1:45pm **#004-GC Influence of Mint and Basil Phytochemicals against Bacterial Biofilm Formation**
» Cephus Bess-Grunewald, Dr. Bidisha Sengupta

2:30pm **Post-Section Chairs Meeting**
COB 307

4:30pm **Outstanding Texas Educator - Mrs. Jamie Flint**
External Site

5pm **Distinguished Texas Scientist - Dr. Rusty Towell**
External Site

6pm **Awards Banquet**
External Site