



College of
Science and Mathematics
TARLETON STATE UNIVERSITY

2022 Summer Research Showcase – August 11, 2022

Program

Oral Presentations – Science Building Room 102

2:00-3:00 PM

Time	Dept	Presenting Author(s)	Additional Co-Authors	Faculty mentor	Title
2:00-2:09	BIOL	Adriana M. Perrucci		Kristin K. Herrmann & Charles R. Randklev	Parasites of freshwater mussels of Texas
2:10-2:19	BIOL	Tiffany Lujan	Kristin Sefcik	Drs. Dustin Edwards & Jesse M. Meik	Spatiotemporal Variation in Microbiota Community Structure in Wild and Captive Barton Springs Salamanders (<i>Eurycea sosorum</i>) and Austin Blind Salamanders (<i>Eurycea waterlooensis</i>)
2:20-2:29	CHGP	Alyssa H. Kohler		Dr. Rajani Srinivasan	Efficacy of a Plant-Derived Polymeric Drug Delivery System Used to Deliver Antibiotics to Produce Cytotoxic Effects on Bacteria
2:30-2:39	CHGP	Michael Fowler	Blake Saurenmann	Dr. Rajani Srinivasan	Removing Microplastics from Water using Plant-based Polymers
2:40-2:49	MATH	Gavin McIntosh	Avery Campbell & Melanie Little	Dr. Bryant Wyatt	Supraventricular Tachycardia Study Using a Dynamic Computer-Generated Left Atrium
2:50-2:59	MATH & CHGP	Vianey Rangel, Cody Drolet, Erin Davis	Kolin Yancey	Drs. Scott Cook & Anne Egelston	Inferring Voting Rates and Preferences of Racial Minority Groups from Publicly Available Data

**Poster Presentations – Science Building 1st Floor Hallway
3:00-4:30 PM**

Poster #	Dept	Presenting Author(s)	Additional Co-Author(s)	Faculty mentor	Title
1	BIOL	Adriana M. Perrucci		Drs. Kristin K. Herrmann & Charles R. Randklev	The effect of trematode infection on the reproduction and mortality of freshwater mussels of Texas
22	BIOL	Aeron Pennington	Selina Alvarado and Faith Cox	Drs. Dustin Edwards & Harold Rathburn	Modulation of Bacterial Host Phenotypes by Mycobacteriophage Pixie Gene Products
5	BIOL	Ciciley Weise	Adrianna Perrucci	Dr. Kristin Herrmann	Connecting the life cycles of trematodes within freshwater mussels and fish hosts
8	BIOL	Dasire Brawley	Selina Alvarado and Gustavo Vazques	Dr. Dustin Edwards	Bacteriophage-delivering Hydrogels for the Treatment of Nontuberculous Mycobacteria Infections
23	BIOL	Kelly Carroll	Dacie Judd, Caroly Leija, Kristen Sefcik	Dsr. Janice Speshock &, Jeff Brady	Comparing the microbiomes of a native and invasive Texas grass to determine potential biocontrol methods
16	BIOL	Kelsea Wade, Taylor Clanton, Jeff Blackwell		Dr. Allan Nelson	Rare plant community and orchid leads to botanical surveys with Bosque County, Texas landowners
17	BIOL	Kristin Sefcik		Drs. Jeff Brady, Stephanie Brady, Janice Speshock, & Jesse Meik	Source Tracking of Fecal Indicator Bacteria in Texas Coastal Waters
20	BIOL	Love Leigh Sansom		Dr. Rathburn, Dr. Edwards, Dr. Sanderford	Determination of Cas4 Enzymatic Activity of Gene 67 from the Bacteriophage Arlo
19	BIOL	Skylar O. Terrell		Dr. Harold B. Rathburn	Isolation and Analysis of Sesbania vesicaria Trypsin Inhibitor Protein

3	CHGP	Amber Leotaud	Cecilia Shadrock, Kelsea Wade, Blake Saurenmann, Michael Fowler	Drs. Rajani Srinivasan, Stuart Weis & Barbara Bellows	Study the effect of plant-based polymers as treatment agent for Dairy Lagoon water and its reuse in plant irrigation and soil characteristics
4	CHGP	Blake Saurenmann	Amber Leotaud and Michael Fowler	Dr. Rajani Srinivasan and Dr. Daniel Marble	Removal of Microplastics, Lithium, and alpha particles from ground water using Organic Polymers
9	CHGP	David Northup		Dr. Anne Egelston	Urban Sprawl and Sustainable Development: Exploring the Relationship Between Local Sustainability Measures and Peri-Urbanization
10	CHGP	Derek Martin		Dr. Shaukat Goderya	Planet Hunting in Open Cluster
12	CHGP	Esmae Velsen	Trent Patterson	Dr. William Lance Whaley	Osage Orange Isoflavones may act as Herb Control Agents
18	CHGP	Michael Fowler	Blake Saurenmann	Dr. Rajani Srinivasan	Removing Microplastics from Water using Plant-based Polymers
21	CHGP	Olga M. Garcia		Dr. Linda Schultz	Spectrophotometric Measurement of Solubility of Cu II Salts: A Qualitative Analysis Lab Exercise
2	CHGP	Parker Droguett	Taryn Gibbs, Sara Tuck	Dr. William Lance Whaley	Intramolecular Hydrogen Bonding in Isoflavones and Hypericin
15	CHGP	Samuel Rodriguez	Taryn Gibbs	Dr. William Lance Whaley	Isolation of Osajin and Pomiferin in a Form Suitable for Testing Anti-tumor Activity
25	CHGP	Tanner J. Taylor		Dr. Linda Schultz	Comparison of Measurement of Urinary Sulfate Levels in Swine by Conductometric Titration and Ion Chromatography
27	CHGP	Yasmine Butler	Gus Vasquez, Alyssa Kohler, Tracy Rangel, Ann Murry	Dr. Rajani Srinivasan	Huanani™ a wonder drink to reach faster alcohol sobriety
6	MATH	Dashon Mitchell & Derek Hopkins		Dr. Christopher Mitchell	A mathematical model for Onchocerciasis and Resistance in Treatment

7	MATH	Dashon Mitchell and Joseph Douglas	Derek Hopkins	Drs. Scott Cook & Christopher Mitchell	Improving Parameter Estimation for Disease Models using Bayesian Statistics
11	MATH	Eram Khan	Phylicia Collie	Dr. Beth Riggs, Dr. Sherri Benn, Mr. Martin Contreras, Dr. Kathy Horak Smith	Conversations about Mathematics
13	MATH	Gavin McIntosh	Avery Campbell and Melanie Little	Dr. Bryant Wyatt	Supraventricular Tachycardia Study Using a Dynamic Computer-Generated Left Atrium
14	MATH	Kaylin Priddy	Dulce Ochoa, Holly Rener, Kenzie Dunagan, Micaiah Meyers and Trinity Smith	Dr. Eileen Faulkenberry, Mr. Michael Warren and Ms. Jordan McCain	Formative Assessment of Middle Grades Students' Proportional Reasoning
24	MATH	Michael Attoh, Severin Bassole, Dashon Mitchell, David Osei, Teddy Oweh		Drs. Chris Mitchell & Scott Cook	MODELS OF DISEASE SPREAD USING STOCHASTIC PROCESSES ON NETWORKS
26	MATH & CHGP	Vianey Rangel, Cody Drolet, Erin Davis	Kolin Yancey	Drs. Scott Cook & Anne Egelston	Inferring Voting Rates and Preferences of Racial Minority Groups from Publicly
28	MATH	Aurod Ounsinegad		Dr. Nick Komar, Nick Panella, and Dr. Kevin Caillouet	Molecular Analysis of Blood-fed Mosquitoes & the Presence of WNV-Neutralizing Antibodies in Wild Avian Sera