UNIVERSITY of WEST FLORIDA

SURP 2023

SUMMER UNDERGRADUATE RESEARCH PROGRAM SYMPOSIUM

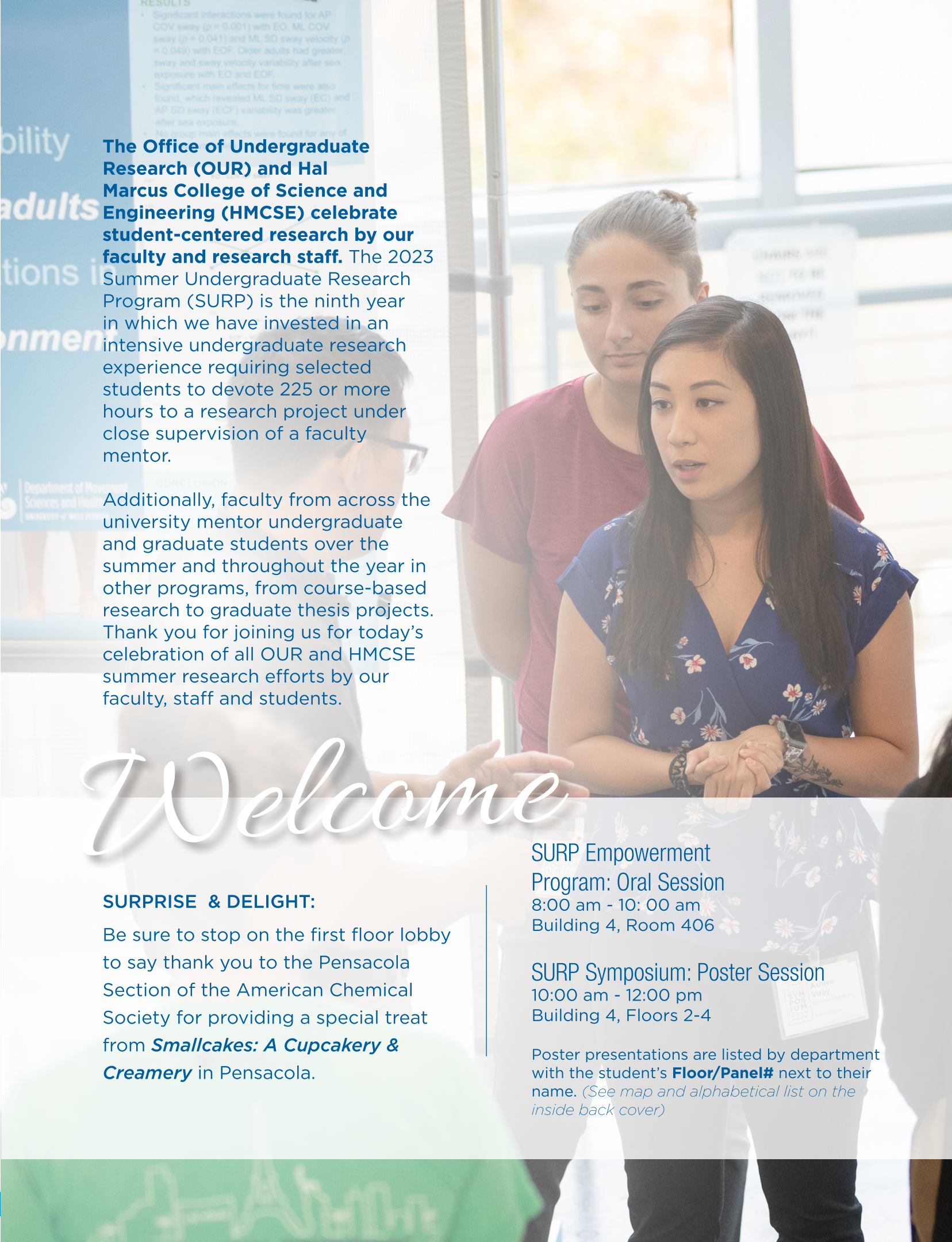
presented by

OFFICE OF UNDERGRADUATE RESEARCH

AND

HAL MARCUS
COLLEGE OF SCIENCE AND ENGINEERING

AUGUST 11 | 10AM - 12PM



The Office of Undergraduate Research (OUR) and Hal Marcus College of Science and Engineering (HMCSE) celebrate student-centered research by our faculty and research staff. The 2023 Summer Undergraduate Research Program (SURP) is the ninth year in which we have invested in an intensive undergraduate research experience requiring selected students to devote 225 or more hours to a research project under close supervision of a faculty mentor.

Additionally, faculty from across the university mentor undergraduate and graduate students over the summer and throughout the year in other programs, from course-based research to graduate thesis projects. Thank you for joining us for today's celebration of all OUR and HMCSE summer research efforts by our faculty, staff and students.

Welcome

SURPRISE & DELIGHT:

Be sure to stop on the first floor lobby to say thank you to the Pensacola Section of the American Chemical Society for providing a special treat from ***Smallcakes: A Cupcakery & Creamery*** in Pensacola.

SURP Empowerment Program: Oral Session

8:00 am - 10: 00 am
Building 4, Room 406

SURP Symposium: Poster Session

10:00 am - 12:00 pm
Building 4, Floors 2-4

Poster presentations are listed by department with the student's **Floor/Panel#** next to their name. *(See map and alphabetical list on the inside back cover)*

EMPOWERMENT PROGRAM
ORAL SESSION | 8:00 - 10:00 am Room 406

Student	Faculty Mentor	Funding/Research Support
Kayla Chatman		
Changes in extreme dew point temperature occurrences in the Southeastern USA: 1948-2022	Dr. Jason Ortegren, HMCSE - Earth & Environmental Sciences	Office of Undergraduate Research
Kaylin Colvin-Reece		
Exploring the Spatial Correlations Between Socio-Economic and Environmental Injustices	Dr. Zhiyong Hu, Travis Erikson, HMCSE - Earth & Environmental Sciences	Office of Undergraduate Research
Alayna Currey		
The University of West Florida Ecosystem Study: light availability, soil texture, and soil seed banks in hardwood-versus pine-dominated forests	Dr. Frank Gilliam, HMCSE - Biology	Willis and Victoria Mullet Innovation Award
Samantha MacFarland		
Using Phage Display to Target and Inhibit the Activity of VEGFRs	Dr. Rodney Guttmann, HMCSE - Biology	Office of Undergraduate Research
Bianca Malone		
Optimizing the synthesis of copper(I) phenylacetylide	Dr. Tim Royappa, HMCSE - Chemistry	Office of Undergraduate Research
Nadia Mrahi		
Neurophysiological Alpha Wave Entrainment in the Flash Visual Evoked Potential P2	Dr. Jim Arruda, UKCOH - Psychology	Office of Undergraduate Research
Samantha Watkins		
Can Copper(I) Phenylacetylides Containing an Amine Group Be Made?	Dr. Tim Royappa, HMCSE - Chemistry	John Thayer & Joan Ames Burr Undergraduate Research Fund
Leo Young		
The University of West Florida Campus Ecosystem Study: light availability, soil texture, and soil seed banks in hardwood- versus pine-dominated forests	Dr. Frank Gilliam, HMCSE - Biology	John Thayer & Joan Ames Burr Undergraduate Research Fund

POSTER PRESENTATIONS
Admin & Law

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Laylah Curran	**3/28**			
A Push for Momentum: Florida's Avenue to Advocacy Against Child Sexual Exploitation		None	Dr. Jennifer Brinkley, CEPS - Admin & Law, Legal Studies	Office of Undergraduate Research

POSTER PRESENTATIONS
Biology

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Isaac Albrecht	**2/7**			
The affects of a warming ocean on the omnivorous shark Sphyrna Tiburo		None	Dr. Wayne Bennett, HMCSE - Biology	Office of Undergraduate Research
Heaven Brandt	**2/8**			
Characterization of dopamine receptor signaling on cell viability in human "neutrophil-like" cells		None	Dr. Peter Cavnar, HMCSE - Biology	Office of Undergraduate Research
Bonnie Bruner	**2/1**			
Investigating the Effects of HER2 cDNA Transfection and Identifying Novel Binding Partners using Phage Display		Lexie Tremaine, Samantha MacFarland	Dr. Rodney Guttmann, HMCSE - Biology	Office of Undergraduate Research
Tori Costilow	**2/9**			
Synthesis of 2 Chloro-Benzo[b] thiophene Derivatives With Potential Antimicrobial Activity		Vy Le, Maria J. Peña Bú	Dr. Prerna Masih, HMCSE - Biology	Office of Undergraduate Research and MARC Program
Brenna Cunningham	**2/12**			
Morphological and Molecular Catalog of Marine Invertebrates from the Florida Panhandle With An Emphasis on Echinoderms		None	Dr. Victoria Bogantes, HMCSE - Biology	Office of Undergraduate Research

MAGIC MOMENT

When we sampled our first echinoderm. This was our second sampling trip because our first attempt was rained out, we were out of luck this time because we had been sampling for hours and had not found one echinoderm. But at the last attempt at finding one, we found a sea cucumber. This moment really raised my spirits and filled me with joy not only because we finally found a specimen, but also because sea cucumbers are my favorite type of echinoderm. After this, I was more motivated to keep going and remembered why I wanted to do this project.

- Brenna Cunningham, Biology

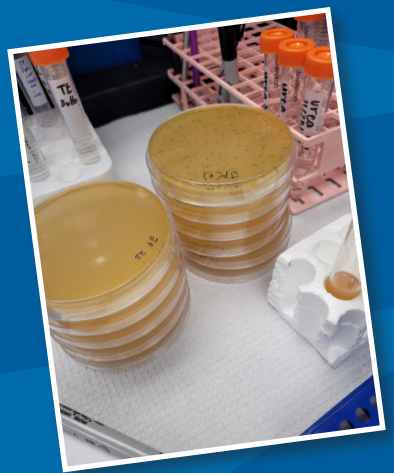
Pictured above: Brenna Cunningham processing samples and photographing sea cucumbers and going through her samples from the field and labeling/preserving them.

BIOLOGY CONT.

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Alayna Currey	**2/19**			
The University of West Florida Ecosystem Study: light availability, soil texture, and soil seed banks in hardwood-versus pine-dominated forests		Leo Young, Brenton Davis, Cayden Perry	Dr. Frank Gilliam, HMCSE - Biology	Office of Undergraduate Research
Samantha Hurst	**2/17**			
Characterization of Loggerhead, Green, and Potential Hybrid Sea Turtle Eggs On the Florida Gulf Coast		Lindsay Curl	Dr. Alexis Janosik, HMCSE - Biology	Office of Undergraduate Research
Lauren Kemp	**2/5**			
Search of Calpain II Inhibitor Using Phage Display Technique		None	Dr. Rodney Guttmann, HMCSE - Biology	Office of Undergraduate Research
Samantha McFarland	**2/3**			
Using Phage Display to Target and Inhibit the Activity of VEGFRs		Bonnie Bruner, Lexie Tremaine	Dr. Peter Cavnar, HMCSE - Biology	Office of Undergraduate Research
Brianna Nicholson	**2/18**			
Morphological and Molecular Catalog of Marine Invertebrates from the Florida Panhandle With An Emphasis on Echinoderms		None	Dr. Victoria Bogantes, HMCSE - Biology	Office of Undergraduate Research

BIOLOGY CONT.

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Joey Peterson	**2/6**			
Development of Spidroin MaSp2 using M13 Phage Display		None	Dr. Rodney Guttmann, HMCSE - Biology	Office of Undergraduate Research
Hannah Roscom	**2/10**			
Synthesis of derivatives of 4-chloro substituted benzo[b]thiophene for structure-activity relationship (SAR) studies as antimicrobial agents		Maria J. Peña Bú	Dr. Prerna Masih, HMCSE - Biology	MARC Program
Maddy Scott	**2/4**			
Identifying bacterial phage specific to calpain-cleaved tau in-vitro		None	Dr. Rodney Guttmann, HMCSE - Biology	Office of Undergraduate Research
Lexie Tremaine	**2/2**			
Identifying Phage to Regulate EGF Receptor Activity to Kill Cancer Cells		Bonnie Bruner, Samantha MacFarland	Dr. Rodney Guttmann, HMCSE - Biology	John Thayer & Joan Ames Burr Undergraduate Research Fund
Lindsay Wolfe	**2/11**			
Synthesis of 4-bromo derivatives of benzo[b]thiophene for structure-activity relationship (SAR) studies as antimicrobial agents		Mekenzie Petersen	Dr. Prerna Masih, HMCSE - Biology	Office of Undergraduate Research



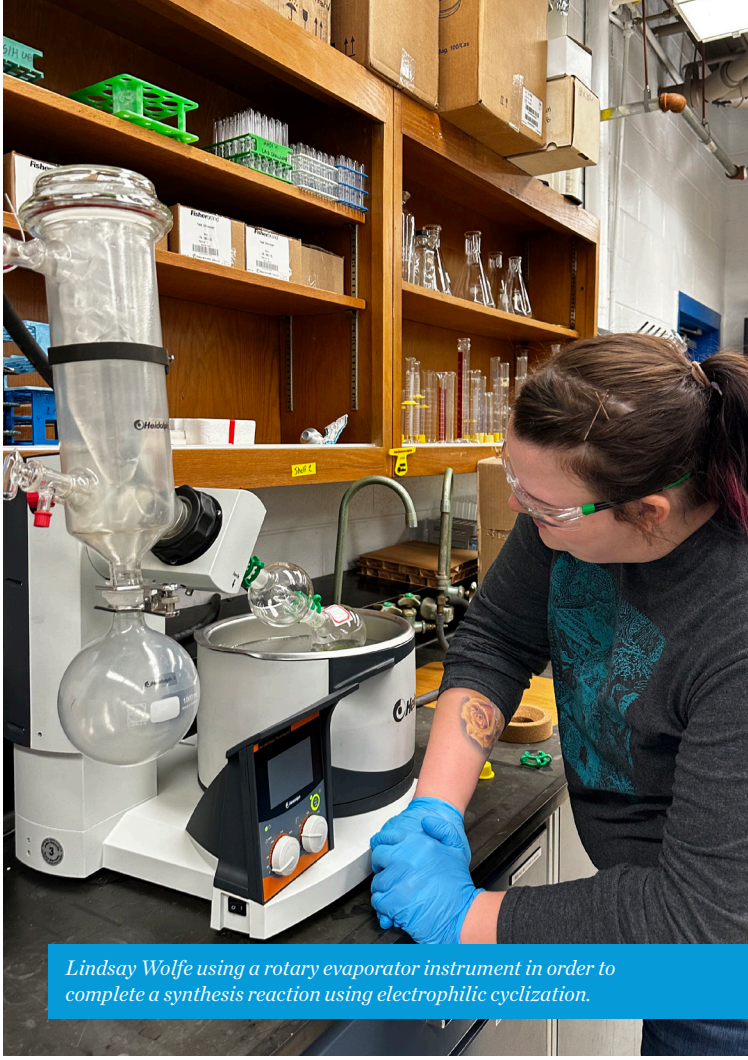
Joey Peterson's petri dishes with bacterial colonies.

MAGIC MOMENT

When I first successfully isolated a segment of DNA I had synthesized for my project. My mentor and I had just finished performing a gel purification of my DNA and had just seen our isolated DNA where we expected it to be. This moment gave me a lot of confidence in myself and in the success of my project. It also gave me confidence in my abilities as a first-time researcher and gave me feelings like "The project is working" and "I can do this."

- Joey Peterson, Biology

Lauren Kemp using a micropipette to prepare test tubes for her experiment.



Lindsay Wolfe using a rotary evaporator instrument in order to complete a synthesis reaction using electrophilic cyclization.

POSTER PRESENTATIONS

CEDB | Center for Environmental Diagnostics and Bioremediation

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Emma Bowland	**2/20**			
Naturally Occurring Frequency of Antimicrobial Resistances in Human-Skin Associated Yeasts		Yasemin Fidan	Dr. Joe Lepo, HMCSE - CEDB	None - Volunteered
Francesca Brasfield	**2/21**			
Phytoplankton Community and Water Quality Monitoring of Perdido Bay		Mackenzie Rothfus	Dr. Amanda Croteau, HMCSE - CEDB	Office of Undergraduate Research
Madison Harvey	**2/22**			
Survey of disturbances in Santa Rosa Sound seagrass beds: ray pits vs. prop scars		Morgan Armstrong, Leyna Alvarado, Barbara Albrecht	Dr. Jane Caffrey, HMCSE - CEDB	Office of Undergraduate Research

POSTER PRESENTATIONS
Chemistry

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
James Curd	**4/51**			
Synthesis and characterization of metallosurfactants containing lanthanides ions		None	Dr. Patrick Barber, HMCSE - Chemistry	Office of Undergraduate Research
Jonah Fisher	**4/73**			
Can You Feel the Heat? The Analysis of Hot Sauce		None	Dr. Karen Barnes, HMCSE - Chemistry	Office of Undergraduate Research
Michele Foulkrod	**4/68**			
Herbs: Are They Toxic? Is Fresh Best?		Brianna Meredith, Shane Miller, Jennifer Willis, Steven Varnum	Dr. Karen Barnes, HMCSE - Chemistry	None - CURE program
Trevor Hemming	**3/43**			
Green Synthesis of Copper(I) 1-Hexynide		None	Dr. Tim Royappa, HMCSE - Chemistry	Office of Undergraduate Research
Daesha Henry	**4/57**			
Preperation of chitin-based films for photosensitization of singlet oxygen		Bianca Dawson, Farah Lino, Joyce Mattes, Briana Perea	Dr. Patrick Barber, HMCSE - Chemistry	Office of Undergraduate Research
Jefferson Jiang	**4/59**			
Synthesis of Linear and Angular Five-Ring Thienoacene via Sequential Ring Formation		Declan McGurk, Elizabeth McConnell	Dr. Tanay Kesharwani, HMCSE - Chemistry	Office of Undergraduate Research
Langley Knighten	**4/56**			
Discovery of New Electrophilic Sulfur Cyclizations		Faith Christofferson	Dr. Tanay Kesharwani, HMCSE - Chemistry	Office of Undergraduate Research
Ethan Loftus	**4/52**			
Synthesis of Luminescent Lanthanide Ion Complexes for Arsenic Detection		Kate Harper, Suyee Win, Joyce Li, Mai Hoang	Dr. Patrick Barber, HMCSE - Chemistry	Office of Undergraduate Research

MAGIC MOMENT

When I ran my first sample completely by myself and the data turned out really good, and when I met with Dr. Benz and she said that the data also showed really good technique. This moment helped me build my confidence in my lab skills and overall as a research student.

- Brianna Meredith, Chemistry

CHEMISTRY CONT.

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Declan McGurk	**4/55**			
Environmentally Benign Synthesis of Benzofuran via Electrophilic Sulfur Cyclization		Sierra Rich, Langley Knighten, Faith Christofferson, Maria J. Peña Bú	Dr. Tanay Kesharwani, HMCSE - Chemistry	Office of Undergraduate Research
Brianna Meredith	**3/47**			
Colorimetric Characterization of Ligands for Metal Cation Detection		None	Dr. Pamela Benz, HMCSE - Chemistry	Office of Undergraduate Research
Georgia Ness	**4/49**			
Investigating Smoothie King's Smoothies: A "fruit-ful" Comprehensive Analysis		Peyton Stalcup	Dr. Karen Barnes, HMCSE - Chemistry	Office of Undergraduate Research
Zach Patane	**4/54**			
Development of Environmentally Benign Bromocyclization Reaction		Charlie Womack, Maria J. Peña Bú	Dr. Tanay Kesharwani, HMCSE - Chemistry	Office of Undergraduate Research
Brianna Perea	**4/58**			
Preperation of chitin-based films for photosensitization of singlet oxygen		Bianca Dawson, Farah Lino, Daesha Henry, Joyce Mattes	Dr. Patrick Barber, HMCSE - Chemistry	Office of Undergraduate Research

MAGIC MOMENT

I had two SURP magic moments. One was when other students would come to me to help give them advice about their project or with how to be successful with public speaking and presenting their research. Another magic moment is with learning and working on new instrumentation. Having experience on different instruments helps prove my hypothesis on my project. It helps me gain confidence in my chemistry knowledge and what research I am doing.

- Kayla Spencer, Chemistry

Pictured above: Kayla Spencer filtering the marina water before running it on the solar lamp and the HPLC.

CHEMISTRY CONT.

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Vu Pham	**3/25**			
Synthesis of 1,5,9 - Triazacyclotridecane (TACT)		None	Dr. Ajay Lajmi, HMCSE - Chemistry	Office of Undergraduate Research
Mikayla Porter	**3/46**			
Analysis of Acetaminophen Using Cyclodextrin Enhanced Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry		Elijah D. Mayo, Victoria Drake, Rosemary Nguyen, Jonathan Hobbs	Dr. Karen Molek, HMCSE - Chemistry	Willis and Victoria Mullet Innovation Award
Ian Ramirez de Arellano	**4/71**			
Analysis of Pre-workout		None	Dr. Karen Barnes, HMCSE - Chemistry	Office of Undergraduate Research
Marianna Sabino	**3/26**			
Synthesis of a Thiadiaza Calpain Protein Mimic		None	Dr. Ajay Lajmi, HMCSE - Chemistry	Office of Undergraduate Research
Zac Sanders	**4/53**			
Synthesis of 1-thiaphenalene via electrophilic sulfur mediated cyclization reaction		None	Dr. Tanay Kesharwani, HMCSE - Chemistry	Willis and Victoria Mullet Innovation Award

CHEMISTRY CONT.

Student / Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Derek Savoie 3/27			
Macrocyclic Amine Synthesis Methodology Evolution	None	Dr. Ajay Lajmi, HMCSE - Chemistry	Office of Undergraduate Research
Danika Scheffler 4/70			
Kitten "Carb-mageddon": Unmasking the Carbohydrate Conundrum in Cat Nutrition	Jojo Agro	Dr. Karen Barnes, HMCSE - Chemistry	None - CURE program
Amanda Schwartz 3/44			
Green Synthesis of Copper(I) 3-Fluorophenylacetylide	None	Dr. Tim Royappa, HMCSE - Chemistry	Office of Undergraduate Research
Caroline Sonen 4/69			
Nutritional Variation in Farm VS Store Eggs	Zachary Bercier	Dr. Karen Barnes, HMCSE - Chemistry	None - CURE program
Kayla Spencer 3/48			
Determining Hydroxyl Radical Production and Arsenic Contamination in Pensacola Marinas	Anne Harper, Kalani Dempsey, Josh Pfneisel, Brianna Meredith	Dr. Pamela Benz, HMCSE - Chemistry	Office of Undergraduate Research
Peyton Stalcup 4/50			
Synthesis of 3-Halobenzothiophene via 1,3-Dihalo-5,5-dimethylhydantoin Mediated Electrophilic Cyclization	Georgia Ness	Dr. Tanay Kesharwani, HMCSE - Chemistry	Office of Undergraduate Research
Audrey Stemen 4/60			
Synthesis, photophysical, and solid-state characterization of luminescent lanthanide ion complexes	David Jaramillo, Gia Capristo	Dr. Patrick Barber, HMCSE - Chemistry	John Thayer & Joan Ames Burr Undergraduate Research Fund
Madison Tarrance 4/72			
Determination and Comparison of Xanthophyll Carotenoid Concentration in Vegetables after Various Cooking Methods through High-Phase Liquid Chromatography.	None	Dr. Karen Barnes, HMCSE - Chemistry	None - Research Course

Taking Research to the Next Level

The Office of Undergraduate Research (OUR) is a centralized office that supports student and faculty engagement in undergraduate research campus-wide. This support occurs through (1) student programs, (2) faculty programs, and (3) advocacy and engagement in the campus community. At UWF, students who engage with faculty on research projects are more connected to their disciplines, more successful during their time at UWF, and better prepared for future careers. OUR helps undergraduate students find research projects, secure funding for research, build skills that help make them more successful in research and beyond, and provide opportunities for them to practice communicating about their research.

During the summer, we take student research to the next level through the Summer Undergraduate Research (SURP) program. With the support of endowments provided by our generous donors, student researchers receive a stipend as well as funds to purchase materials and supplies for their research projects -- an investment that is invaluable to these students and which allows them to fully engage in research in a way that isn't possible during the academic year. In addition to devoting more than 225 hours on their research projects under the close supervision of a faculty member, SURP students work with OUR throughout the summer to develop professional skills, such as communicating their research to various audiences, incorporating research experience into their resumes, and learning how to network.

> ***"It is our family's hope that this gift furthers the University's stature in the education community and attracts high quality students, so that together we can acheive something for the greater good." - Tim Burr***

Engagement in undergraduate research transforms UWF students and makes them more competitive in the job market after graduation. Even the process of apply for OUR funding is part of the student's professional developement, which can include writing a research proposal and putting together a budget!

We are very grateful to have the Hal Marcus Endowment, the John Thayer and Joan Ames Burr Undergraduate Endowment, the Willis and Victoria Mullet Innovation Endowment as well as the Office of Undergraduate Research in providing the financial assistance needed to make SURP a successful endeavor to our students.

CHEMISTRY CONT.

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Samantha Watkins	**3/45**			
Can Copper(I) Phenylacetylides Containing an Amine Group Be Made?		None	Dr. Tim Royappa, HMCSE - Chemistry	John Thayer & Joan Ames Burr Undergraduate Research Fund
Jennifer Willis	**4/64**			
Analyzing Mineral and Volatile Composition in Green Onion Breeding: A Comparative Study of Earth, Lunar, and Martian Soils		Megan Brown, Steven Varnum	Dr. Karen Barnes, HMCSE - Chemistry	Office of Undergraduate Research
The Influence of Terrestrial to Extraterrestrial Soils on Food Quality: A Study of Tomato Breeding using Earth, Lunar, and Martian Soils		Megan Brown, Steven Varnum	Dr. Karen Barnes, HMCSE - Chemistry	Office of Undergraduate Research
Microgreens: Does a Micro or Macro Change Occur When Grown in Earth, Lunar, and Martian Simulant Soils?		Megan Brown, Steven Varnum	Dr. Karen Barnes, HMCSE - Chemistry	Office of Undergraduate Research
Hit Me With Your Best Shot: A Comparative Analysis in Starbucks' Coffee Grounds and Espresso Quality		Megan Brown, Steven Varnum, Danika Scheffler	Dr. Karen Barnes, HMCSE - Chemistry	Office of Undergraduate Research

POSTER PRESENTATION
Communication

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Sylvia Davidson	**4/61**			
Golden Apple: Monster Creation and Independent Film		None	Dr. Paul Pilger, CASSH - Communication	Office of Undergraduate Research

MAGIC MOMENT

My "magic moment" was, after having felt pretty defeated for the first part of the summer, Dr. Schwartz and Ms. Harris talked to me and encouraged me not to give up. They gave me some options for how to proceed and took the pressure off of me to complete everything by the end of the summer. I felt relieved and ready to try again because they saw how hard I had worked in the past and knew I was capable even if things weren't going as smoothly as before.

- SURP Student

MAGIC MOMENT

I do not believe that there was a single moment along this journey that my self-confidence grew dramatically. There might have been imperceptible jumps here and there, but most of the work has been with experimenting on past results of the project and trying to understand the methods and data used--figuring out why things worked and why things did not. Pieces are slowly building upon each other, and a body of knowledge is slowly forming in my mind. This is where my confidence grows.

- SURP Student

POSTER PRESENTATIONS
Computer Science

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Tristan Byrd	**2/23**			
Studying the Communication Model and Usability of the MEDUSA: Mobile Environment for Developing User Situation Awareness		Austin Franklin, David Huson, Chase Lamkin, Steven Kass	Dr. Thomas Reichherzer, HMCSE - Computer Science	Willis and Victoria Mullet Innovation Award
Sy Fontenot	**2/24**			
Anomaly Detection in IoT Sensor Data		Dr. Achraf Cohen	Dr. Thomas Reichherzer, HMCSE - Computer Science	John Thayer & Joan Ames Burr Undergraduate Research Fund

POSTER PRESENTATIONS
Earth & Environmental Sciences

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Kayla Chatman	**3/29**			
Changes in extreme dew point temperature occurrences in the Southeastern USA: 1948-2022		None	Dr. Jason Ortegren, HMCSE - Earth & Environmental Sciences	Office of Undergraduate Research
Kaylin Colvin-Reece	**3/42**			
Using GIS to Map and Calculate Spatial Correlations Between Socio-Economic and Environmental Injustices		None	Dr. Zhiyong Hu, Travis Erikson, HMCSE - Earth & Environmental Sciences	Office of Undergraduate Research
Mikala DuBose	**3/41**			
Implementing a Lesson Plan to Analyze Sand Dunes		Rachel Ledford	Dr. Phillip Schmutz, HMCSE - Earth & Environmental Sciences	Office of Undergraduate Research

MAGIC MOMENT

Was the experience of realizing I had an issue with data accuracy and finding a way to solve it. When trying to start the tree survey, my GPS was drifting all over the place. After coming to the conclusion that I needed to regroup before collecting data officially, I went to figure out how I could make my location data more accurate. I'm a novice when it comes to ArcGIS and the field maps app it comes with, but I managed to find a setting that would alter the radius of accuracy for the GPS. The next day I went back and noticed improvement in the accuracy and much less positional drift. The accuracy went from a range of 30ft down to a range between 7.3-12ft. I would consider this a mastery experience.

- SURP student

Pictured above: Looking like a cryptid in a poncho because it started to rain while collecting samples.

EARTH & ENV. SCI. CONT.

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Hazel Heffernan	**3/34**			
Spatial Analysis of Tree Species Near the Thompson Bayou		None	Dr. Zhiyong Hu, Travis Erikson, HMCSE - Earth & Environmental Sciences	Office of Undergraduate Research
Erin McCafferty	**3/30**			
Changes in the Polar Front Jet Stream Related to Arctic Warming: A Review		None	Dr. Jason Ortegren, HMCSE - Earth & Environmental Sciences	Volunteer
Osei Richens	**3/33**			
LiDAR analysis of the urban environment on Pensacola Beach		None	Dr. Zhiyong Hu, Travis Erikson, HMCSE - Earth & Environmental Sciences	Office of Undergraduate Research
Melissa Shirley	**3/31**			
Urban Climate Policies in the U.S.A. Have we forgotten the Urban Heat Island?		None	Dr. Jason Ortegren, HMCSE - Earth & Environmental Sciences	Directed Study
Dharma Shrecengost	**3/32**			
Paper vs. Digital: E-waste policy, practice, and implications		None	Dr. Jason Ortegren, HMCSE - Earth & Environmental Sciences	Research Course

POSTER PRESENTATION
Electrical & Computer Engineering

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Drake Fulton	**4/62**			
Review of techniques and tools used for Condition Monitoring of Transformers		None	Dr. Bhuvaneswari Ramachandran, HMCSE - Electrical & Computer Engineering	Office of Undergraduate Research

POSTER PRESENTATION
Intelligent Systems & Robotics

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Stephane Lee	**4/63**			
Autonomous Navigation and Obstacle Avoidance using Quadruped Robotic Platform in Unstructured and Dynamic Environments		None	Dr. Hakki Erhan Sevil, HMCSE - Intelligent Systems and Robotics	John Thayer & Joan Ames Burr Undergraduate Research Fund

POSTER PRESENTATIONS
Mathematics & Statistics

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Brooklyn Peters	**3/39**			
Pay Gap Between Men and Women's Collegiate Athletic Organizations		None	Dr. Samantha Seals, HMCSE - Mathematics & Statistics	John Thayer & Joan Ames Burr Undergraduate Research Fund
Dylan Wright	**3/35**			
Inferring Connectivity for Computational Neural Network Models		None	Dr. Shusen Pu, HMCSE - Mathematics & Statistics	John Thayer & Joan Ames Burr Undergraduate Research Fund
Grady Wright	**3/40**			
An Examination of the Financial Discipline and Financial Negotiation Behaviors of Couples to Identify Relationship Between Financial Worries		None	Dr. Samantha Seals, HMCSE - Mathematics & Statistics	John Thayer & Joan Ames Burr Undergraduate Research Fund

POSTER PRESENTATIONS

Mechanical Engineering

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Cole Bokowski	**2/13**			
Development of a Novel Spring-Loaded Prosthetic Leg		None	Evan Karavolos, HMCSE - Mechanical Engineering	Directed Study
Julia Kondrat'yev	**2/16**			
Aerospike Configurations' Effect on Aerodynamic Properties of Projectiles		None	Dr. John Stutz, HMCSE - Mechanical Engineering	Willis and Victoria Mullet Innovation Award
Kobi Menser	**2/15**			
Unlocking the Potential: Aerospike Design and its Impact on Projectile Aerodynamics		None	Dr. John Stutz, HMCSE - Mechanical Engineering	John Thayer & Joan Ames Burr Undergraduate Research Fund
Kalim Muhammad	**2/14**			
Electron Image Machine		None	Evan Karavolos, HMCSE - Mechanical Engineering	Directed Study

POSTER PRESENTATIONS

Movement & Health Sciences

Denise Carillo	**3/38**			
The Protective Effects of Exercise on Binge Alcohol-Induced Neuron Injuries		None	Dr. Youngil Lee, UKCOH - Movement & Health Sciences	MARC Program, but not MARC project

MAGIC MOMENT

When the team was contemplating different ideas to add spin to SolidWorks CFD and I came up with a good idea to try. Although it did not work, it was impactful that I could contribute to the research project and that I did have some understanding of what was going on.

- Kobi Menser, Mechanical Engineering

MAGIC MOMENT

When my faculty mentor referred to me as a leader in the lab. Our lab consists of running participants with EEG technology - something I discovered I really love to do. There are a lot of little details that go into running a successful EEG scan, so when my mentor asked me to teach new members how to do things and facilitate the process, I was really excited.

- Nadia Mrahi, Psychology

Above: Nadia Mrahi getting prepped to be ran with EEG technology. The electrodes have all been placed and a lab mate fills each one with conduction gel in a syringe.

POSTER PRESENTATIONS
Psychology

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Nadia Mrahi	**3/37**			
Neurophysiological Alpha Wave Entrainment in the Flash Visual Evoked Potential P2		Angelique Jefferson	Dr. Jim Arruda, CASSH - Psychology	Office of Undergraduate Research

POSTER PRESENTATIONS
Reuben O'D. Askew Dept. of Government

Student	Floor/Panel	Co-Author(s)	Faculty Mentor	Funding/Research Support
Neeky Laguerre	**Virtual**			
A Systematic Comparison of NATO Member States' Cybersecurity Policies and Strategies		None	Dr. Jacob Shively, Reuben O'D. Askew Dept of Government	Office of Undergraduate Research
Kaitlyn Stephens	**3/36**			
Sweden's Decision to Join NATO: Applying a Grand Strategy Analysis Framework		None	Dr. Jacob Shively, Reuben O'D. Askew Dept of Government	Office of Undergraduate Research

MAGIC MOMENT

When every different case that I was researching started connecting and I felt so confident in my findings. It made me really excited and inspired for my paper. My mentor and scholars and diplomats who wrote their experiences and research definitely contributed to this.

- Kaitlyn Stephens, Government

Special Events Hosted by OUR

SURP students participate in weekly professional development workshops to build soft skills, such as communication and networking. We try to make these workshops as engaging as possible, getting students up on their feet and talking to each other and sometimes campus guests.

SURP Bingo is a fun activity that SURP students participate in early on in the summer where they use a Bingo card as a networking "prompt". For example, they might have to learn about another student's strange phobia or hear about a unique talent. Through the Bingo game, students practice networking with each other in a low stakes environment and start to make connections with other students in the program.

Chalk Talks are quick summaries of their research that students give to small groups. The chalk talks aren't prepared presentations, but are instead more impromptu discussions with their peers. During the unscripted presentations, students are encouraged to sketch out experiments, processes, or cycles that may be part of their research projects to help support the discussion. Chalk talks have proved to be really powerful tools for SURP students gaining confidence in communicating their research, especially to non-expert audiences.

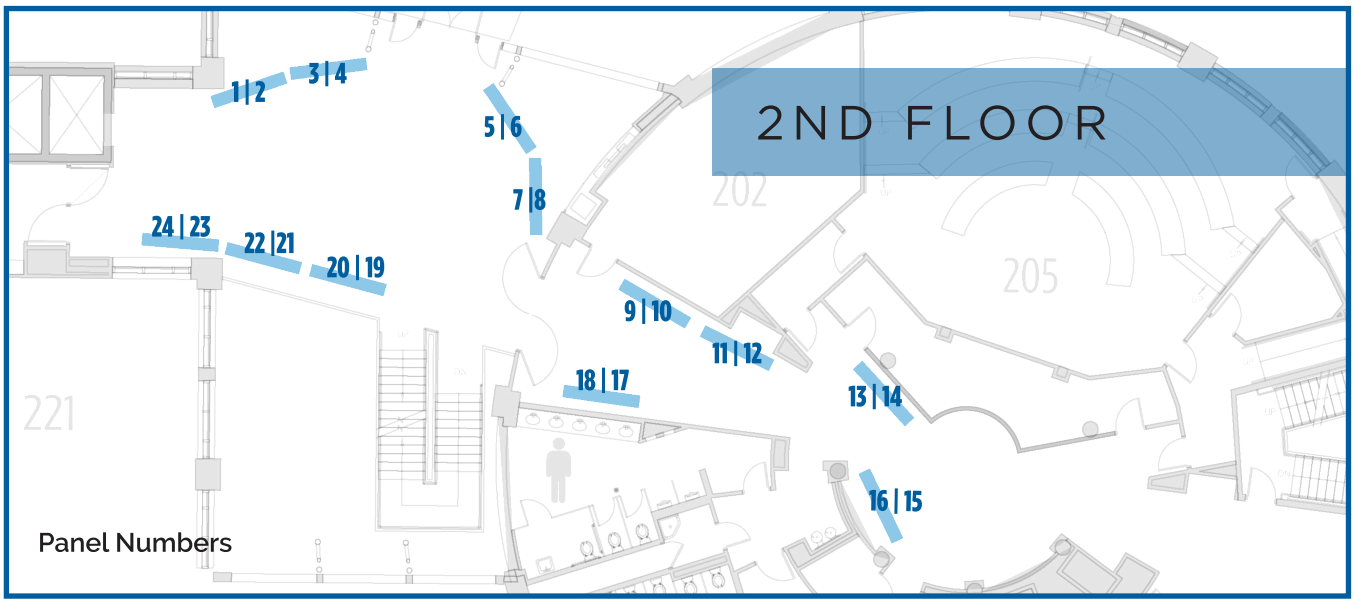
OUR hosts a **Mocktail Networking Party** every summer and invites UWF faculty and staff from Career Services, the Library, etc. to attend and talk with the SURP students. The networking party is low stakes practice for our students with less structured, but extremely important, "chit chat" that happens in professional settings and can often lead to collaborations or partnerships around shared interests.

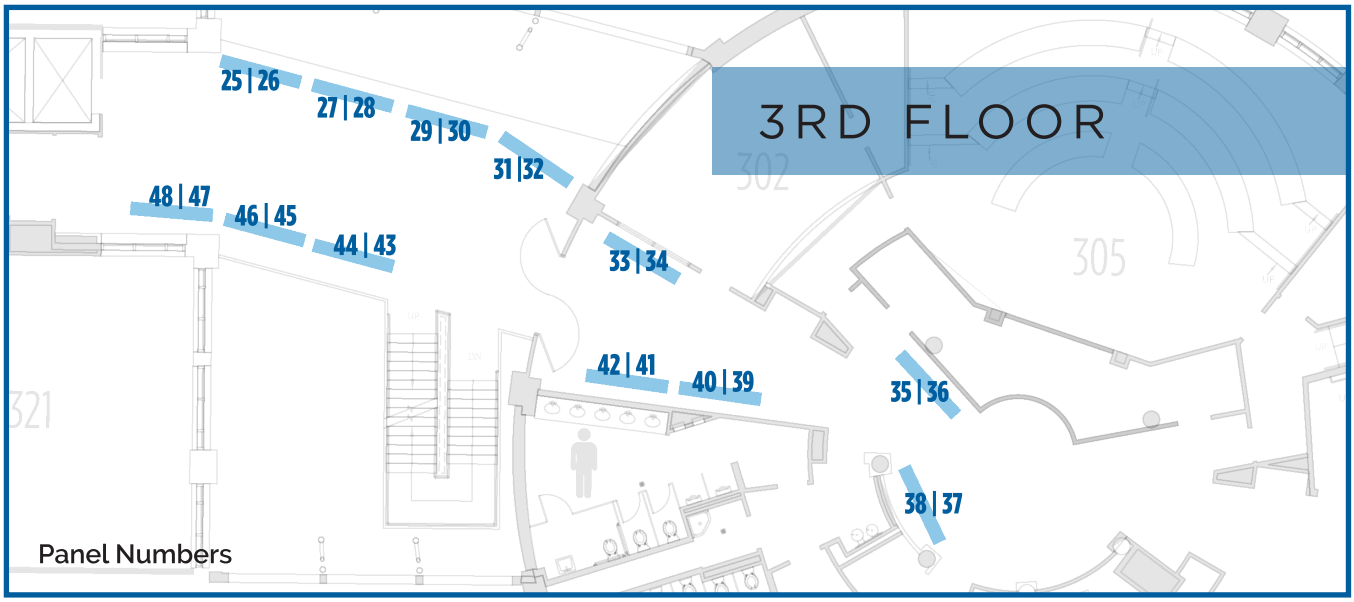
MAGIC MOMENT

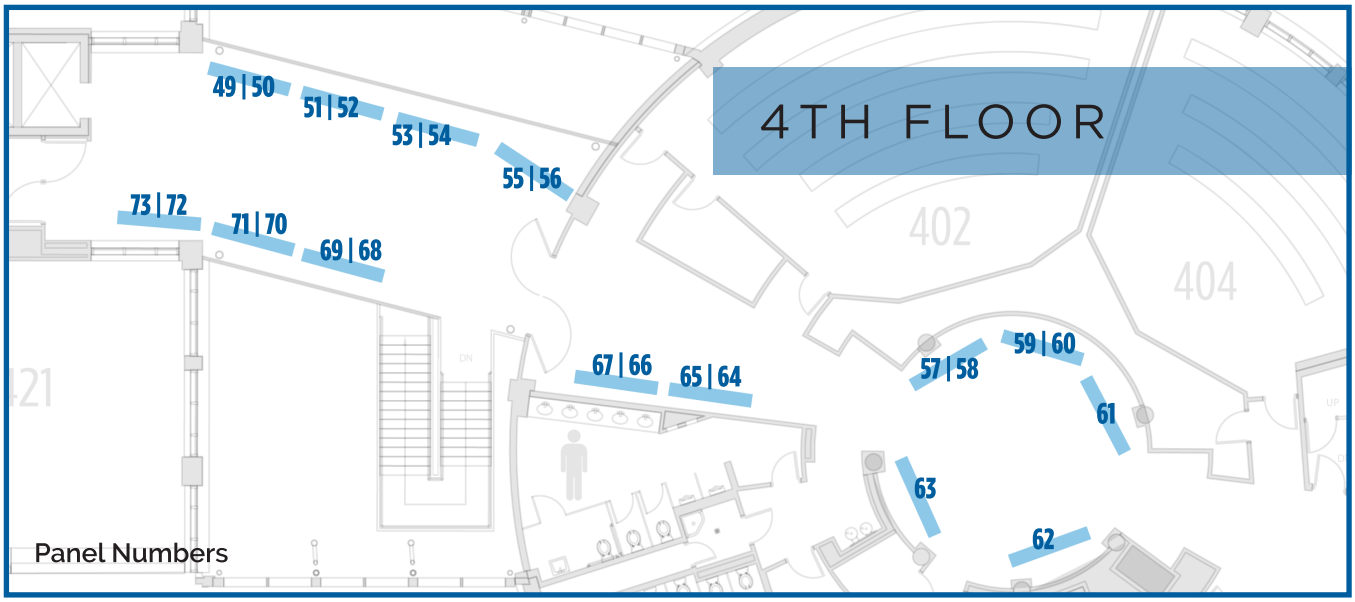
Definitely, the skills that I have developed are networking and professionalism, and I would say my confidence and my social skills have greatly improved because the SURP program has pushed me out of my comfort zone and I have been able to grow because of that.

- SURP Student

POSTER PRESENTATIONS MAP







LAST	FIRST	FL/Panel #
Agro	Jojo	4 70
Albrecht	Barbara	2 22
Albrecht	Isaac	2 7
Alvarado	Leyna	2 22
Armstrong	Morgan	2 22
Bercier	Zachary	4 69
Bokowski	Cole	2 13
Bowland	Emma	2 20
Brandt	Heaven	2 8
Brasfield	Francesca	2 21
Brown	Megan	4 64
Bruner	Bonnie	2 1
Byrd	Tristan	2 23
Capristo	Gia	4 60
Carrillo	Denise	3 38
Chatman	Kayla	3 29
Christofferson	Faith	4 55/56
Colvin-Reese	Kaylin	3 42
Costilow	Tori	2 9
Cunningham	Brenna	2 12
Curd	James	4 51
Curl	Lindsay	2 17
Curran	Laylah	3 28
Currey	Alayna	2 19
Davidson	Sylvia	4 61
Davis	Brenton	2 19
Dawson	Bianca	4 57/58
Dempsey	Kalani	3 48
Drake	Victoria	3 46
DuBose	Mikala	3 41
Fiden	Yasemin	2 20
Fisher	Jonah	4 73
Fontenot	Sy	2 24
Foulkrod	Michele	4 68
Franklin	Austin	2 23
Fulton	Drake	4 62
Harper	Anne	3 48
Harper	Kate	4 52
Harvey	Madison	2 22
Heffernan	Hazel	3 34
Hemming	Trevor	3 43
Henry	Daesha	4 57
Hoang	Mai	4 52
Hobbs	Jonathan	3 46
Hurst	Samantha	2 17
Huson	David	2 23
Jaramillo	David	4 60
Jefferson	Angelique	3 37
Jiang	Jefferson	4 59
Kass	Steven	2 23
Kemp	Lauren	2 5
Knighten	Langley	4 56
Kondrat'yev	Julia	2 16
Laguerre	Neeky	Virtual
Lamkin	Chase	2 23
Ledford	Rachel	3 41
Le	Vy	2 9
Lee	Stephane	4 63
Li	Joyce	4 52
Lino	Farah	4 57/58
Loftus	Ethan	0 0
MacFarland	Samantha	2 3
Marshall	Bailey	3 38
Mattes	Joyce	4 57/58
Mayo	Elijah D.	3 46
McCafferty	Erin	3 30
McConnell	Elizabeth	4 59
McGurk	Declan	4 55
Menser	Kobi	2 15
Meredith	Brianna	3 47
Miller	Shane	4 68
Mrahi	Nadia	3 37
Muhammad	Kalim	2 14
Ness	Georgia	4 49
Nicholson	Brianna	2 18
Nyguyen	Rosemary	3 46
Patane	Zach	4 54
Peña Bú	Maria J.	2 10
Perea	Brianna	4 58
Perry	Cayden	2 19
Peters	Brooklyn	3 39
Peterson	Joey	2 6
Peterson	Mekenzie	2 11
Pfneisel	Josh	3 48
Pham	Vu	3 25
Porter	Mikayla	3 46
Ramirez de Arellano	Ian	4 71
Rich	Sierra	4 55
Richens	Osei	3 33
Roscom	Hannah	2 10
Rothfus	Mackenzie	2 21
Sabino	Mariana	3 26
Sanders	Zac	4 53
Savoie	Derek	3 27
Scheffler	Danika	4 70
Schwartz	Amanda	3 44
Scott	Maddy	2 4
Shirley	Melissa	3 31
Shrecengost	Dharma	3 32
Sonen	Caroline	4 69
Spencer	Kayla	3 48
Stalcup	Peyton	4 50
Stemen	Audrey	4 60
Stephens	Kaitlyn	3 36
Talcott	Tim	3 38
Tarrance	Madison	4 72
Tremaine	Lexie	2 2
Varnum	Steven	4 64
Watkins	Samantha	3 45
Willis	Jennifer	4 64
Win	Suyee	4 52
Wolfe	Lindsay	2 11
Womack	Charlie	4 54
Wright	Dylan	3 35
Wright	Grady	3 40
Young	Leo	2 19

More MAGIC MOMENTs

I had gotten the most yield and purity of the developed product of my team. This moment gave me satisfaction and confidence, and I would like to thank Dr. Royappa and the team for helping me make this product.
- Jeep Yates, Chemistry

My SURP "magic moment" was when I was informed by my mentor that I would have to start over from the beginning. The four weeks of work I completed prior were out the window and I experienced grief over my loss of progress. But then a feeling of confidence washed over me and I felt excited to start over because I realized that I was capable of starting over. That feeling of "This is nothing. I've got this. Easy." is still the best moment I've ever had in the lab.
- Bonnie Bruner, Biology

During my discussion with my mentor, he emphasized that I possess intrinsic qualities that are not easily acquired through education: a genuine interest, unwavering enthusiasm, and relentless drive. According to him, these distinguishing attributes will separate me from others in a remarkable way. That day, I vowed to never question my potential and instead stride forward with steadfast confidence.
- Bianca Malone, Chemistry

Various SURP Students
My SURP "magic moment" was when I successfully got my simulation to display the biological behavior I was after. Modelling the dynamics of a biological system comes with its own problems, but translating the high-level abstractions typically modeled for neural behavior into something more low-level to properly implement in simulation is tough. Overcoming this hurdle by reading through the many papers and resources, talking it out with my mentor, and spending my time doing the thing resulted in something I am proud of.

My SURP "magic moment" was when I was allowed to use the GCMS without supervision. My mentor gave me instructions and then left me to run the instrument and analyze data. It affected my confidence very positively, as they trusted me enough to use a very expensive instrument, as well as interpret data correctly. I had never used an instrument on my own so it meant a lot to me when they zipped out the room, confident in my abilities to run the experiment alone.

My "magic moment" was when I actually got good yields on an experiment in Organic Lab. When this happened it significantly boosted my self confidence in the lab.

My SURP "magic moment" was when I was fully able to characterize my synthesis product correctly. this helped me solidify my knowledge in my field of chemistry and my mentor applauded me on not needing any help.

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