THE UNIVERSITY OF TEXAS AT TYLER HONORS COLLEGE PRESENTS THE

EIGHTH ANNUAL LYCEUM

RESEARCH SHOWCASE

APRIL 14, 2023

3RD FLOOR OF THE UNIVERSITY CENTER

- 9AM-12PM: ORAL PRESENTATIONS
- 12PM-1PM: FINE ARTS SESSION
- 1PM-3PM: POSTER SESSION
- 3:30PM: AWARDS CEREMONY
Dear Friends,

Welcome to the eighth annual Lyceum Student Research Showcase! As a part of the University of Texas at Tyler’s Research Month, we have today over 120 student scholarly projects on the widest range of topics. Whether you attend the panels in the morning or the poster session in the afternoon, you will have the opportunity to learn about so many things, from the efficiency of heat transfer in cookware, to the use of methamphetamine in the Third Reich, and even snake fungal disease. The students at this year’s Lyceum make up a diverse group of scholars, who, alongside their professors, have expanded the boundaries of our knowledge. The creation, expansion, and communication of knowledge lies at the heart of UT Tyler’s mission, and today’s showcase demonstrates the ability, insight, and work ethic of our entire campus community.

This year’s Lyceum ushers in two new and significant moments in our institution’s history. For the first time we are hosting the Lyceum as the University of Texas at Tyler’s Honors College. In January of 2023, President Calhoun and Provost Mirmiran made our transition from the Honors Program to the Honors College official. We are grateful for their advocacy and support of programs like the Lyceum, which remind all of us of the value of scholarly inquiry.

More importantly, today’s Lyceum features some very special guests, honors students from Tyler Junior College. We are grateful for our cross-town honors colleagues, Dave Funk and Dannika Blackhurst, who have supported their students in presenting at this year’s Lyceum. Please be sure to visit with the TJC Honors students and make them feel welcome!

Finally, to our guests, student presenters, and audience, we thank you for your presence here and hope you enjoy all that our students and campus have to offer.

Sincerely,

Dr. Paul D. Streufert—Dean of the Honors Program
<table>
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<th>List of Judges:</th>
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<td>May Abdelaziz</td>
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<td>Mohammed Ali</td>
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<td>Matthew Vecchione</td>
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<td>Sidney Wilson</td>
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Oral Presentation Schedule

9 am Oral Presentation Session:
Panel A:
UC 3140                Moderator: Dr. Tammy Cowart

Abinash Bajgain
Graduate student                    Mentor: Dr. Tahsin Khajah
Optimal Design of a Composite Foot Prosthetic Insole using Evolutionary Optimization

Jacob Anthony
Graduate Student                    Mentor: Dr. Chung-Hyun Goh
Novel Method for Multiple Point Joint Analysis to Optimize Knee Joint Movement for Robot-Aided Gait Training

Sufian Almitwali
Graduate Student                    Mentor: Dr. Chung-Hyun Goh
Development of the Next Generation Smart Artificial Ventilation Device

Ratri Mukherjee
Graduate Student                    Mentor: Dr. Premanan Indic
Significance of INter-Hypoxemia Interval in Early Detection of Adverse Outcome in Preterm Infants: A Machine Learning Approach
Panel B:  
UC 3422  
Moderator: Dr. Torey Nalbone

**Dinesh Shrestha, Prabhat Kattel, Shoukath Sulthana, Jiří Trousil, David Pearson**  
Undergraduate Students  
Mentor: Dr. Santosh Aryal  
Synthesis and Characterization of Therapeutic Nanoparticle: Impact of Nanoparticle Weight on Cellular Behaviors

**Justin Wright**  
Undergraduate Student  
Mentor: Dr. Ali Azghani  
RT-qPCR Analysis of Intrinsic Resistance Genes in 26 Multi-Drug Resistant Pseudomonas Aeruginosa Clinical Isolates

**Thierry Assamoi**  
Undergraduate Student  
Mentor: Dr. Rachel Mason  
Creation of Inexpensive and Robust Gas Phase IR Cell

**Peter Nsiah**  
Graduate Student  
Mentor: Dr. Vijayakumar Boggaram  
PPAR-y Regulation of Induction of Inflammatory Mediators by Organic Dust in THP-1 Macrophage Cells
10 am Oral Presentation Session:

Panel A:

UC 3422

Moderator: Dr. Amir Mirmiran

Ethan Wild, Thomas Willingham, Ruben Cerna, Ryan Willis, Erik Vazquez
Undergraduate Students
Analysis of the Space Shuttle Columbia Accident
Mentor: Dr. Matthew Lucci

Cameroon Eastman, Jonathan McMullen, Karli Stanley, Devansh Singh,
Matthew Goodson, Benita Ibabaza
Undergraduate Students
Novel Research into the Collapse of the Florida International University Pedestrian Foot Bridge
Mentor: Dr. Matthew Lucci

Austin Sizemore, Jacob Campbell, Jessica Taylor, Julian Mendes,
Jose Suarez, Trent Rogers
Undergraduate Students
Aerogel: A Thermal Shield for O-Rings
Mentor: Dr. Matthew Lucci

Mayokun Oke, Graduate Student
Effects of Catalysts and Operating Conditions on the Hydrothermal Liquefaction of Saccharina Latissima for the Production of Biofuel
Mentor: Dr. Fernando Resende

Panel B:

UC 3322

Moderator: Dr. Torey Nalbone

David George
Undergraduate Student
Realistic Hydraulic Design
Mentor: Dr. Michael McGinnis

Colton Kelley
Undergraduate Student
“Can you Repeat that, Please?”; ERP Learning Outcomes by Teaching Methods
Mentor: Dr. David Hull

Nickolas Rios
Graduate Student
The Art of Nuclear Negotiation
Mentor: Dr. Mark Owens

Ben Burns
Undergraduate Student
Machine Learning and is Applications to Recommended Systems
Mentor: Dr. Clifford Bearden
Panel C:  
UC 3140  
Moderator: Dr. Colleen Swain

**Joanna Fagan**  
Graduate Student  
Mentor: Dr. Sarah Sass  
Cultural Humility and the Therapeutic Alliance

**Paige Lloyd**  
Graduate Student  
Mentor: Dr. Forest Kaiser  
Supporting New Teachers and the Impact on Teacher Retention, Student Achievement, and Campus Efficacy

**Kristen Patterson**  
Graduate Student  
Mentor: Dr. Ramona Grad  
Intimate Partner Violence Trauma: A Qualitative Study focused on Counselor Training Implications for Counseling Women who have Experienced Intimate Partner Violence

**Egor Shestakov**  
Undergraduate Student  
Mentor: Dr. Meryem Saygili  
The relationship between Obesity, Health, and socioeconomic factors
11 am Oral Presentation Session:

Panel A: Moderator: Dr. Javier Kypuros

Md Fahim Shahriar
Graduate Student Mentor: Dr. Aaditya Khanal
Visual and Investigation of CO2 Density-Driven Convective Transport in Vertical Hele-Shaw Cell: Implications for Long-Term CO2 Sequestration

Rashish Adhikari
Graduate Student Mentor: Dr. Nelson Fumo
Tool for Economic Analysis of Evaporative Coolers

Soniya Poudel Chhetri
Graduate Student Mentor: Dr. Premanan Indic
Tracking of Bradycardia Events to Study Heart Rates Dynamics of Preterm Infants Using an LSTM- Based Deep-Learning Model

Shah Zayed Riam
Graduate Student Mentor: Dr. Aaditya Khanal
Application and Comparative Performance Evaluation of Machine Learning Models in Predicting CO2 Trapping in Deep Saline Aquifers
Panel B:

UC 3140 Moderator: Dr. Ken Wink

Suzannah Bozarth
Undergraduate Student Mentors: Jared Dickson & Dr. Matthew Stith
The Divide: Examining Tyler’s Racial History & Demography

Jacob Williams
Undergraduate Student Mentor: Dr. Colin Snider
Amicum Historicorum

Madison Isenberg
Undergraduate Student Mentor: Dr. Mandy Link
Volksdrogen: The Third Reich Powered by Methamphetamine

Kelsey Roberson
Undergraduate Student Mentor: Anita Brown
Crises for Freedom: The Endurance of Social Reforms

Panel C:

UC 3322 Moderator: Dr. Brent Bill

Jana Swimberghe
Undergraduate Student Mentor: Dr. Matthew Greenwold
Are all Crawfish Created Equal? A Genetic Study Examining the Relationship Between Two Subspecies and Their Hybrids

Lezley Hart
Undergraduate Student Mentor: Alan Lizarraga
Correlation Between Snake Fungal Disease and Predation by Avian Predators

Sarah E. Glaesemann
Graduate Student Mentor: Dr. Sean C. Butler
Synthetic Studies of Draginamide E and its Potential Treatment of Leishmaniasis
Creative Projects
Mabry Theatre

Moderator: Dr. Paul Streufert

1. Megan Gray
   Graduate Student
   Mentor: Dewane Hughes
   Exploring the Ideas of Emotion Through Different Materials and Processes

2. Mark Mata, Lily Cahal, & Ani Aparicio,
   Undergraduate Students
   Mentors: Sharon Deuby & Sue Bugg
   Woodwind Ensemble Pieces for Two Flutes and Clarinet

3. Luis E. Perez
   Undergraduate Student
   Mentor: Alexis Serio
   Exploring the Power and Ephemerality of Intimacy in the Ordinary

4. Zoe Williams
   Undergraduate Student
   Mentor: Alexis Serio
   Connection
Poster Session Key:

Located in the University Center Ballroom:

1. **Liaquat Ali**  
   Graduate Student  
   Mentor: Dr. Sean Butler  
   Synthesis and the Controlled Self-Assembly of Coiled Oligopeptides

2. **Rahma Aly, Shoukath Sulthana, Robert Beaudoin, Ayman Hamouda**  
   Graduate Students  
   Mentor: Dr. Santosh Aryal  
   CMPI nanoparticle formulation to enhance its delivery to intracellular targets

3. **Abrar Ahmed**  
   Graduate Student  
   Mentor: Dr. Matthew Vechione  
   Application of Machine Learning Models to Predict Severity of Vehicle-to-Vehicle Crashes

4. **Abrar Ahmed**  
   Graduate Student  
   Mentor: Dr. Mena Souliman  
   Increase in Roughness Due to Environmental Factors in Rigid Pavements

5. **Micheal Asama**  
   Graduate Student  
   Mentor: Dr. Fernando Resende  
   Process Simulation and Yield Optimization of Hydrothermal Liquefaction of Macroalgae (Kelp) Using Mixtures of Model Compounds.

6. **Timothy Averill**  
   Undergraduate Student  
   Mentor: Ashley Dalby  
   Physiological Effects of Aerobic Exercise on CVD Risk Factors

7. **Ben Baber**  
   Undergraduate Student  
   Mentor: Susan Doty  
   Better Baber Indices - Algorithmic Analysis of Historical Stock Market Data

8. **Mawiyia Bin Mukarram Bajusair**  
   Graduate Student  
   Mentor: Dr. Matthew Vechione  
   Development of Machine Learning Models to Predict Crash Severity Based on Unsafe Speed.
9. **Mawiya Bin Mukarram Bajusair**  
   Graduate Student  
   Mentor: Dr. Mena Souliman  
   Development of Machine Learning Model to Predict Alligator Cracking in Asphalt Pavements.

10. **Anageli Balbino & Selena Kwok**  
    Undergraduate Students  
    Mentor: Dr. Sean Butler  
    Synthesis of a Polymer End-Capping Agent: Continued Development of an Undergraduate Laboratory Experiment

11. **Diala Bani Mustafa**  
    Graduate Student  
    Mentors: Dr. Shih Feng Chou, Dr. Galina Florova, & Dr. Andrey Komissarov  
    Controlled Drug Delivery Through the Hierarchical Design of Microfibers

12. **Robert Beaudoin**  
    Graduate Student  
    Mentor: Dr. Ayman Hamouda  
    The Effect of Nicotinic Receptor Potentiators on Human Lung Cell Viability

13. **Alma Bluesummers & Jonathan Thomas**  
    Graduate Students  
    Mentors: Dr. Olga Berkout & Jonathan Thomas  
    Social comparison on social media and distress in individuals with unmet mental health needs.

14. **Rachel Boshers**  
    Graduate Student  
    Mentor: Dr. Veronda Willis  
    Using Compustat in the Business Classroom

15. **Harrison Boynton**  
    Graduate Student  
    Mentor: Dr. Michael Barnett  
    Affect Intensity in Relationship to Social Anxiety

16. **Savannah Breding**  
    Undergraduate Student  
    Mentor: Dr. Lauren Kirby  
    Creativity and Dissociation: Connection Between Normative Dissociation and Creative Thinking

17. **Joseph Brewer**  
    Graduate Student  
    Mentor: Dr. McGuire
A Literature Review of Integrating Exercise into PTSD Treatment
18. Sarah Burgett  
Graduate Student  
Mentor: Dr. Joshua Banta  
High-Resolution Ecological Niche Modeling of Three Texas Crayfish Species Using Hydrology

19. Eric Burnett, Clay Woodcock, Jose Valdez & Uriel Vela  
Undergraduate Students  
Mentor: Dr. Muath Salim  
Drone Arm Optimization

20. Crawford Cannon  
Undergraduate Student  
Mentor: Dr. Matthew Lucci  
Heat Transfer Analysis of a Steam Powered Generator

21. Jennifer Cole MSN, RN  
Graduate Student  
Mentor: Dr. Lauri John  
Decreasing stress & anxiety in nursing students: a mindfulness-based program intervention.

22. Ethan Collins  
Undergraduate Student  
Mentor: Dr. Vivek Pandey  
Introduction to Cryptocurrency

23. Wren Cook, Savannah Fitch, & Vivian Tavarez  
Undergraduate Students  
Mentor: Dr. Yvonne Ralph  
Attachment Styles and the Relationship to Academic Fulfillment

24. Hannah Cornwell  
Graduate Student  
Mentor: Dr. Michael Barnett  
Coping Strategies as a Mediator Between Impulsivity and Depression

25. Grace Davis  
Undergraduate Student  
Mentor: Dr. Joanna Neel  
No title listed

26. Martha du Preez  
Undergraduate Student  
Mentor: Dr. David Milan  
Morita Equivalence and Graph Inverse Semigroups
27. **Jeanné Dube**,  
   Graduate Student  
   Mentor: Dr. Michael Barnett  
   Factor Structure of the Texas Functional Living Scale Among Older Adults

28. **Jeanné Dube**  
   Graduate Student  
   Mentor: Dr. Michael Barnett  
   The Impact of Task Novelty on a Virtual Reality-Based Procedural Learning Task

29. **Rachel Emerine**  
   Graduate Student  
   Mentors: Dr. Shih-Feng Chou,  
   Dr. Galina Florova, Dr. Andrey Komissarov  
   Delivery of Poorly Water-Soluble Drugs using Polymer Fibers and Microparticles

30. **Matthew S. Fontanese, Joseph J. Muraira, Christian López, Lance Barela, Alex García, Jeanné M. Dube, Kailee Prentice, & Allison M. Coldiron**  
   Graduate Students  
   Mentor: Dr. Michael Barnett  
   General Absorption Mediates Narcissism’s Effect on Private but Not Public Self-Absorption

31. **Josue Gaona**  
   Undergraduate Student  
   Mentor: Dr. Ayman Hamouda  
   Examining the effect of a substituted carbamate positive allosteric modulator on the (α4)3(β2)2 and (α4)2(β2)3 nicotinic acetylcholine receptors.

32. **Sarah Gerrels-Hinkle**  
   Graduate Student  
   Mentor: Dr. Michael Barnett  
   Holier Than Thou: Pathological Narcissism and Religious Commitment Moderate Religious Intolerance

33. **Elaina Gonzalez**  
   Undergraduate Student  
   Mentor: Dr. Ann Beebe  
   The Objectification and Possession of Women’s Bodies in Edgar Allan Poe’s Short Stories
34. **Rebekah A. Griffin, Harrison G. Boynton, William D. Malender, Erin E. Hulsman, Cameron T. Hicks, Derek C. Killingsworth, Jenna V. Lao, Samuel C. Van Vleet, Allyson M. Coldiron**

Graduate Students

Mentor: Dr. Michael Barnett

Impulsivity Explains Variance Beyond the Big Five in Select Dimensions of Perfectionism

35. **Logan A. Guillory, Jake S. Avendano, Harrison G. Boynton, Rebekah A. Griffin, Mikalea Juarez, Chris Lopez, Hannah E. Cornwell, Karina Kapoor**

Graduate Students

Mentor: Dr. Michael Barnett

Emotion Regulation Strategies in Relation to Depression, Anxiety, and Stress

36. **Adam Hearnsberger, Conner Morgan, Katy Perry, Andres Beserra, Jose Torres, Elisha Kaiser**

Undergraduate Students

Mentor: Dr. Mathew Lucci

The Efficiency of Wood Burning Stoves as an Alternative Heat Source

37. **Cameron Tyler Hicks**

Graduate Student

Mentor: Dr. Michael Barnett

Psychopathy and Religious Commitment: Is Right-Wing Conservatism a Possible Explanation?

38. **Matthew Hoffman**

Undergraduate Student

An Ongoing Case Study at Creekview High School on the Effects of Air Scrubbers for Improving Indoor Air Quality.

39. **Gaini Ibrasheva**

Undergraduate Student

Mentor: Dr. Dustin Patterson

Application of HK97 Virus-Like Particles Toward Drug Delivery

40. **Megan Jameson, Aaron Lance, Steven Uroda, Alan Taylor, Lizbeth Anchondo, Hugo Carrasco Bohorquez**

Undergraduate Students

Mentor: Dr. Matthew Lucci

Heat Transfer Analysis of an SSD Heatsink
41. **Anavya Jernigan, Israel Joshua Santhosh, Shoukath Sulthana,**  
Undergraduate Students  
Mentor: Dr. Santosh Aryal  
Effect of macrophage derived extracellular vesicles on the surface plasmon resonance induced photothermal properties of gold nanorods

42. **Derek Killingsworth**  
Undergraduate Student  
Mentor: Dr. Michael Barnett  
Avoidant Coping Strategies Mediate the Relationship Between Depressive Symptoms and School Burnout

43. **Cate Kimball, Abbi Fyffe, Julissa Plancarte, & Akshaya Suresh**  
Undergraduate Students  
Mentor: Dr. Yvonne Ralph  
Adolescent Activities and Undergraduate Cognition in Women

44. **Md Irfan Khan**  
Graduate Student  
Mentor: Dr. Aaditya Khanal  
Parametric Study of CO2 Sequestration in Deep Saline Aquifers using data-driven models

45. **Macie Kirkby, Shoukath Sulthana, Dinesh Shrestha,**  
Graduate Students  
Mentor: Dr. Santosh Aryal  
Studying Immune-Cancer Cell Interactions: A Cell-based Approach for Cancer Treatment

46. **Kevin Larios & Andrea M. Reyes,**  
Undergraduate Students  
Mentor: Dr. Kathy Miller  
Intersection of Human Trafficking and Digital Media Platforms

47. **Kristel Ledesma**  
Undergraduate Student  
Mentor: Dr. Brent Bill  
In vivo Expression Analysis of Parkinson’s Disease-Related Genes in Zebrafish

48. **Christian López**  
Graduate Student  
Mentor: Michael Barnett  
Gender Moderates the Relationship Between Attachment Styles and Gratitude
49. Oluwanisola Makinde  
Graduate Student  
Mentor: Dr. Fernando Resende  
Catalytic pyrolysis of beetle killed trees-pine (pinus taeda), ash(fraxinus) and redbay (persea borbonia) for the production of transportation biofuels

50. William Drew Mallender, Erin Hulsman  
Graduate Students  
Mentor: Dr. Michael Barnett  
Parenting Styles in Relation to Life Satisfaction Among Men and Women

Located Around the Third Floor of the University Center:

51. Prem Manoharan  
Graduate Student  
Mentor: Dr. Matthew Vechione  
Development of Machine Learning Models to Predict Crash Severity in East Texas Under Wet Conditions

52. Prem Manoharan  
Graduate Student  
Mentor: Dr. Mena Souliman  
Development of Predicting Model Using Artificial Neural Network to Predict Transverse cracking length in Wet and Dry No Freeze Climatic Regions.

53. Kaevyn Maple  
Graduate Student  
Mentor: Dr. Nelly Yuen  
The Impact of Race Related Stress of the Self-Esteem in People of Color and its Effect on Self Care Behaviors

54. Kaevyn Maple, Shalet Punnoose, Madeline Rodenbaugh  
Graduate Students  
Mentor: Dr. Adam McGuire  
The Experience of Minority Students: Exploring Unconscious Bias in Higher Education

55. Ethan McCarthy  
Undergraduate Student  
Mentor: Dr. Leonard Brown  
Text Summarization Using Cosine Similarity

56. Daniel McSwain  
Undergraduate Student  
Mentor: Dr. Jordan Beaver  
Synthesis of an Ester Wine Additive from Distillery Waste Streams
57. **Amerson Meyers, Kelyne Arnold, Olinda Zusinas**  
Undergraduate Students  
Mentor: Dr. Yvonne Ralph  
The relationship between religion, traditional patriarchal values, and opinions on marriage and divorce

58. **Reham Mohamed**  
Graduate Student  
Mentor: Dr. Shis-Feng Chou  
Cellulose Materials for Drug Delivery Applications

59. **Zeeshan Mohammed**  
Graduate Student  
Mentor: Dr. Matthew Vechione  
Application of Machine Learning Models to Predict Distracted Driving Crash Severity

60. **Zeeshan Mohammed**  
Graduate Student  
Mentor: Dr. Mena Souliman  
Study of LTPP Data for Wet-Freeze Climatic Regions for IRI using Artificial Neural Networking (ANN)

61. **Itzel Montoya, Itzel Montoya, Salima Karki, Shoukath Sulthana, Santosh Aryal, and May H. Abdelaziz,**  
Undergraduate Students  
Mentor: Dr. May Abdelaziz  
Engineering polycaprolactone composite nanofiber antibacterial wound healing scaffolds

62. **Yenifer L Morales**  
Graduate Student  
Mentor: Dr. Michael Barnett  
Optimists Use Healthy Coping Strategies to Improve their Live Satisfaction

63. **Prudviraj Mutyala**  
Graduate Student  
Mentor: Dr. Matthew Vechione  
Predicting Crash Severity at Construction Zones with Workers Present

64. **Prudviraj Mutyala**  
Graduate Student  
Mentor: Dr. Meena Souliman  
Prediction of Faulting in Rigid Pavements by Using Artificial Neural Network

65. **Ikechukwu Nsofor**  
Graduate Student  
Mentor: Dr. Carla Lacerda  
Testing and Characterization of 3D Bioprints
66. Michael A. Nunez  
Undergraduate Student  Mentor: Dr. E. Cory Sills  
Filling in the Past: Restoring a Caddo Vessel Using Modeling Software.

67. Esther Nwachukwu  
Undergraduate Student  Mentor: Dr. Ali Azghani  
Understanding the Mechanism of Pseudomonas Elastase-induced Activation of Epithelial Growth Factor Receptor in vitro.

68. Kristinoba Olotu  
Graduate Student  Mentor: Dr. Fernando Resende  
Novel NI-SIRAL Catalyst for heterogeneous Ethylene Oligomerization

69. Angel Perez  
Undergraduate Student  Mentor: Dr. Santosh Aryal  
3D Printing Cancer: Bioprinting of Human Breast Cancer Cells in a Hydrogel Scaffold to Replicate Tumor Formation

70. Caleb Phillips  
Undergraduate Student  Mentor: Dr. Jordan Beaver  
Extraction of Alpha Acids Into Beer as a Function of Temperature, Ethanol Concentration, and Size

71. Kailee P. Prentice  
Graduate Student  Mentor: Dr. Michael Barnett  
Older Adults’ Aging Expectations Explain Variance in Death Anxiety Beyond Personal Control

72. Ryan Rainey, Christopher Constante, Diego Diaz, Tomisin Bami-Ogunbiyi, Tristan Kiehn, Baylor Reed  
Undergraduate Students  Mentor: Dr. Matthew Lucci  
Examining the mechanical failure of the East Palestine Train derailment of February 2023

73. Isaac J. Rodgerson, Shadow Aiken, Kristen Lewis, Shadow Aiken, Kristen Lewis, and Katelyn Blakely  
Graduate Students  Mentor: Dr. Eric Stocks  
Agency and compliments: A proposed study towards an understanding of the recipient's attitudes towards compliments
74. Adrian Romero  
Graduate Student  
Mentor: Dr. Ayman Hamouda  
Larval Expression Of Dopaminergic Neuron Markers For a Parkinson's Disease-like State In Zebrafish

75. Hope Sabella, Ayaan Khan, Gabrielle Thomas  
Undergraduate Students  
Mentor: Dr. Farah Deba  
Application of Stem Cell Therapy for Osteoarthritis Pain Management

76. Israel Joshua Santhosh, Shoukath Sulthana, Ayaan Khan, Farah Deba  
Undergraduate Students  
Mentor: Dr. Santosh Aryal  
Maximizing tumor targeting using engineered extracellular vesicles derived from activated macrophages

77. Wyatt Schaefer  
Undergraduate Student  
Mentor: Kerfoot Pollock Walker III  
Identification of the Source of C. Perfringens Investigation of Yogurt

78. Anas Mehmood Shahid, Tapiwa Mlambo, Florette Nadine Mkmte, Wendere Sampabre, Ishfar Ahmed  
Undergraduate Students  
Mentor: Dr. Hussain Rizvi  
Outer Space Sample Acquisition and Caching System at 16-Psychy Asteroid

79. Mahi Shaikh  
Undergraduate Student  
Mentor: Dr. Katrin Kellner  
Crayfish Phylogenetic Tree

80. Schi-Lee A. Smith  
Graduate Student  
Mentor: Dr. Katrin Kellner  
Phylogenetic Analysis of Four Closely Related Species of Crayfish in Central Texas

81. Bradley Smith  
Graduate Student  
Mentor: Dr. Matthew Vechione  
Application of Machine Learning Models to Predict Rear-End Crash Severity in East Texas
82. Sergio Sola Garcia  
Undergraduate Student  
Mentors: Dr. Jason Smee and Dr. Dustin Patterson  
Simplified Purification of Ferritin Nanoparticles for Vaccine Development via Insertion of Polyhistidine Tag

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