



Office of Undergraduate Research
LAMAR UNIVERSITY

Undergraduate and
Graduate students and all
faculty/staff
are invited to:

The O.U.R. 2024 Fall Conference

**SEE FOR
YOURSELF**



**Friday, November 15th
Galloway bldg.
College of Business**

🕒 Begins 8 a.m.

For registration please send
an email to our@lamar.edu



**Submit
Abstracts**
Due October 25th

Guest Speakers



David A. Jack, Ph.D.

Professor of Mechanical Engineering;
Program Director of Materials Science and Engineering,
Baylor University

*Establishing the Digital Twin from Nondestructive
Inspection Data for Composite Analysis*

November 15 - from 9 to 9:50 a.m.
Landes 101



Alexander Schiller, PMP

F-15 - Project Engineer at BOEING
*Soaring; A Cardinals Evolution to
the Innovative 777-X Folding Wingtip*

November 15 - 1 to 1:50 p.m.
Landes 101



**ATMOSPHERIC PLASMA
SOLUTIONS™**

Levi Snowden, PMP

R&D Project Manager, Atmospheric Plasma Solutions, Inc.

*Plasma Innovations & Thriving
Through Small Business Research*

November 15 - 4 to 4:40 p.m.
Archer 108



OFFICE OF UNDERGRADUATE RESEARCH
LAMAR UNIVERSITY

WELCOME TO THE O.U.R. 2024 Fall Conference

7:30 AM Registration Opens in Galloway - Business bldg.

Poster Session I 8:00 – 8:45 AM
Chairs: Dr. Milicent Musyoka and Dr. Thinesh Selvaratnam

8:00 – 9:00 AM **Breakfast**

8:50 AM Welcoming Remarks by President Jaime Taylor.

8:55 AM Introduction of our guest speaker Dr. David Jack by Dr. Brian Craig, Professor of Industrial and System Engineering at Lamar University

9:50 – 9:50 AM Dr. David Jack – Professor of Mechanical Engineer, Program Director of Materials Science and Engineering, Baylor University
Establishing the Digital Twin from Nondestructive Inspection Data for Composite Analysis.

Summer Student Research -- Landes 101

Chairs: Dr. Robert Kelley Bradley
Dr. Cristian Bahrim

10:00 AM **Alireza (George) Godsi (withdrawal)**
Major in Biology
Mentors: **Dr. Robert Kelley Bradley #** and **Dr. James Henry %**
Department of Civil and Environmental Engineering
% Department of Chemical and Biochemical Engineering
Lamar University

Fluorometric Study of Release Rate of Drug-Analog Dye in Two-Photon 3D Stereolithography Printed Microstructures.

10:15 AM

Harvest Prater

Major in Speech and Hearing Science

Mentors: **Mrs. Elizabeth Sanders [#] and Mr. Andre Favors [%]**

[#] Mary and John Gray Library

[%] Department of Communication and Media

Lamar University

Asexuals of Color: Experiences of an Invisible Identity.

10:30 AM

Natalia Pulido González

Major in Psychology

Mentor: **Dr. Edythe Kirk**

Department of Psychology

Lamar University

Exploring Ethnicity and Intimate Partner Violence.

10:45 AM

Kayla McKinley

Major in Exercise Science

Mentor: **Dr. Shannon Jordan**

Department of Health and Kinesiology

Lamar University

Does Vaping Nicotine and/or THC Produce Different Levels of Oxidative Stress for Men and Women: An Examination of Markers of Oxidative Stress (8-Isoprostanes) in Expired Respiratory Condensate.

11:00 AM

Mahima Verma

Major in Computer Science

Mentor: **Dr. Jane Liu**

Department of Computer Science

Lamar University

Advancing Protein Downstream Tasks through Pre-trained Large Language Model Representations.

11:15 AM

Ashlin Stinson

Major in Interdisciplinary Studies EC-6

Mentor: **Dr. Yan Yan**

Department of Curriculum & Instruction

Lamar University

Elementary School Classroom Physical and Social Environment Effect on Students' Affective Performance.

11:30 AM

Brandon Stumpf

Major in History

Mentor: **Dr. Jeff Forret**

Department of History

Slavery, Freedom, and the Law in Antebellum Georgia.

11:45 AM

Kirtunia Rahul

Major in Mechanical Engineering

Co-authors: Arief Yudhanto and Pruthul Kokkada Ravindranath

Mentor: **Dr. David Jack**

Department of Mechanical Engineering

Baylor University - Waco

Cohesive Zone Modeling Strategy to Simulate Progressive Delamination Failure in L-shaped CFRP Laminates with Varying Inter-ply Angle Difference.

12:05 PM – Group Photo in the Quad

12:10 – 12:30 PM

Lunch Break – Galloway 116

Poster Session II

12:30 – 1:00 PM

Chairs: Dr. Nicki Michalski and Dr. Sujing Wang

1:00 PM

Introduction of our guest speaker Dr. Alexander Schiller by Dr. Xuejun Fan, Professor of Mechanical Engineering at Lamar University

1:05 – 1:50 PM

Mr. Alexander Schiller – Project Engineering at Boeing

Soaring: A Cardinal's Evolution to the Innovative 777-X Folding Wingtip.



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Breakout Session 1 -- Galloway 124

Communication

Chair: Professor O'Brien Stanley

2:00 PM

Luis Lemmen

Major in Sociology, Politics & Economics

Mentor: **Dr. Nicki Michalski**

Department of Communication and Media

Lamar University

Ethical Evaluation of Nuclear Deterrence on the Example of the Russo-Ukrainian War.

2:15 PM

Alexa Heng

Major in Communication

Mentors: **Dr. Sheila Springer and Dr. Nicki Michalski**

Department of Communication and Media

Lamar University

Navigating Sexual and Emotional Communication in Generation Z University Situationships.

2:30 PM

Marie Panchot

Major in Sociology

Mentor: **Professor O'Brien Stanley**

Department of Communication and Media,

Lamar University

Examining Pop Culture Theories in the Movie Some Like It Hot.

2:45 PM

Helen (Rory) J West-Harp

Major in Communication – Film Studies

Mentors: **Mr. Andre Favors**

Department of Communication and Media

Lamar University

Navigating Sexual and Emotional Communication in Generation Z University Situationships.

3:00 PM **Karen Figueroa**
Major in Communication – Film Studies
Mentor: **Mr. Andre Favors**
Department of Communication and Media,
Lamar University
Letter to Myself.

Breakout Session 2 – Galloway 128
HASBSEB

Chair: Dr. Sara Hillin

2:00 PM **Robyn Gerry**
Major in History
Mentor: **Dr. Mark Mengerink**
Department of History
Lamar University
Music as Oppression or Hope: Alma Rosé and the Women's Orchestra of Auschwitz.

2:15 PM **Avinash Sah**
Major in Mechanical Engineering
Co-author: **Mariah Javed**
Department of Nutrition with Pre-med concentration
Lamar University
Mentors: **Dr. Mamta Singh**
Department of Curriculum and Instruction
Lamar University
Empowering Future Teachers with Port Education & Activities.

2:30 PM **Ramona Young**
Major in University Studies
Mentor: **Mr. Andre Favors**
Department of Communication and Media
Lamar University
The Journey from Black to White in Southwest Louisiana: A Study of Redbones.

2:45 PM

Chloe Lopez

Major in English

Mentor: **Dr. Sara Hillin**

Department of English and Modern Languages

Lamar University

How Southern Gothic Authors Use Genre Tropes to Convey Their Opinions of Racism, Segregation, and Jim Crow Laws.

Breakout Session 3 -- Galloway 116

Medical Research

Chair: Dr. Jill Killough

2:00 PM

Vicky Longoria

Major in Biochemistry

Mentor: **Dr. T. Thuy Minh Nguyen**

Department of Chemistry and Biochemistry

Lamar University

Effect of Zinc Oxide Nanoparticles on the Biosynthesis of Ergosterol in *Candida tropicalis*.

2:15 PM

Kaitlin Ricks

Major in Chemistry and Biochemistry

Co-authors: **Sergio Mendez ^{\$}, Muneeb Akhtar ^{\$}, and Ian Lian [#]**

^{\$} Department of Chemistry and Biochemistry

[#] Department of Biology

Lamar University

Mentors: **Dr. Zhifo Guo**

Department of Chemistry and Biochemistry

Lamar University

N-Amidothiourea Fluorescence Sensor for Sensitive Detection of Zn²⁺ Ions and Cell Imaging: A Tool for Plasma Membrane Analysis.

2:30 PM

Richa Hoy [†]

Major in Medical degree

Co-authors: Batul Shakir[†], Sierra Wood, Celeste Traub, Lauren Richardson, and Ramkumar Menon ([†]Equal contribution of authors)

Mentor: **Dr. Anath Kumar Kammala**

Division of Basic Science and Translational Research, Department of Obstetrics & Gynecology,
The University of Texas Medical Branch at Galveston

Repurposing FDA-Approved Drugs to Prevent Preterm Birth: A Computational and Experimental Approach.

2:45 PM

Harvest Prater

Major in Speech and Hearing Science

Mentor: **Dr. Elizabeth Long, DNP, APRN, GNP-BC, CNS**

JoAnne Gay Dishman School of Nursing

Lamar University

Care Intervention in Aphasia Among Nursing & Speech and Hearing Undergraduates.

3:00 PM

Jill Stokes

Major in Communication emphasis PR

Mentor: **Dr. Nicki Michalski**

Department of Communication and Media

Lamar University

Ethical Implications of Non- Life Saving Hysterectomies in Young Women.

Breakout Session 4 – Landes 101

Medical Research

Chair: Dr. Cengiz Sen

2:00 PM

Aaron Tabor

Major in Criminal Justice

Mentors: **Dr. Millicent Musyoka #** and **Dr. Vidisha Worley \$**

\$ Department of Criminal Justice

Department of Deaf Studies and Deaf Education

Lamar University

Deaf Interactions within the First Responder World: The Communication Issue.

2:15 PM

Caleb Gregory

Major in Physics

Mentor: **Dr. Rafael de la Madrid**

Department of Physics

Lamar University

The Numerical Calculation of the Energies and the Decay Energy Spectra of Quantum Mechanical Resonance.

2:30 PM

Matthew Flores

Major in Mechanical Engineering

Mentor: **Dr. Xianchang Li**

Department of Mechanical Engineering

Lamar University

An analysis of the lift coefficient of 2D Airfoils at Hypersonic Speed.

2:45 PM

Audrey Vincent-Eze

Major in Political Science

Mentor: **Dr. Christina Gregory**

Department of Political Science

Lamar University

Gender Equality Blueprint: Analyzing the Relationship of FML Policies and Cultural Attitudes in OECD Countries.

Breakout Session 5 – Galloway 114
STEM 1

Chair: Dr. Venkatesh Uddameri

2:00 PM

Arjun Shrestha

Major in Computer Science

Mentor: **Dr. Sujing Wang**

Department of Computer Science

Lamar University

Sentiment Analysis of Weather Disasters: A comprehensive Evaluation from Reddit Data.

2:15 PM

Sambeg Dhakal

Major in Computer Science

Mentor: **Dr. Sujing Wang**

Department of Computer Science

Lamar University

Social Media Data Analysis for Community Disaster Resilience: Emotion Detection and Prediction Using Neural Network Models.

2:30 PM

Arip Syaripudin Nur

Major in Civil and Environmental Engineering

Mentor: **Dr. Yong Je Kim**

Civil and Environmental Engineering

Lamar University

Comprehensive Assessment of Ground Subsidence using InSAR, GIS, and Deep Learning in the Southeast Texas Coastal Region.

2:45 PM

Md Saffiquzzaman Chowdhury

Major in Civil Engineering

Mentor: **Dr. Yong Je Kim**

Civil and Environmental Engineering

Lamar University

Comprehensive Analysis of Ground Deformation in Beaumont, Texas: Integrating PS-InSAR, and GeoDetector Techniques to Evaluate Impact Factors and Their Interactions.

3:00 PM

Rishi Bharadwaj

Major in Electrical Engineering

Mentor: **Dr. Cristian Bahrim**

Department of Physics

Lamar University

Changing the Reflectivity of Silica Surfaces Using the Coherent Coupling Between Two cw-Laser Beams.

Breakout Session 6 – Galloway 122

Mechanical Engineering

Chair: Dr. Sushil Doranga

2:00 PM

Md Admay Amif

Major in Mechanical Engineering

Mentor: **Dr. Jack David**

Department of Mechanical Engineering

Baylor University

Quantification of Sub-Surface Wrinkles in Woven Carbon Fiber Reinforced Polymer Laminate Using High-Resolution Ultrasound.

2:15 PM

Mahsa Khademi

Major in Mechanical Engineering

Mentor: **Dr. Jack David**

Department of Mechanical Engineering

Baylor University

Automated Defect Detection and Quantification in Honeycomb Sandwich Panels Using High-Frequency Ultrasound Testing.

2:30 PM

Nafiz Ahmed Badhan

Major in Mechanical Engineering

Co-authors: **S M Yeasin Habib^{\$}, Zhe Fan^{*,*}, Xinchang Zhang [#], and Cheng Sun[%]**

^{\$} Department of Mechanical Engineering, Lamar University

[#] Idaho National Laboratory, Idaho Falls

[%] Clemson University, Clemson, SC

Mentor: **Dr. Xuejun Fan**

Department of Mechanical Engineering

Lamar University

Effects of Cr Addition on the Corrosion and Mechanical Properties of the AlMoNbTi High Entropy Alloy.

2:45 PM

S M Yeasin Habib

Major in Mechanical Engineering

Co-authors: **Nafiz Ahmed Badhan and Zhe Fan**

Department of Mechanical Engineering, Lamar University

Mentor: **Dr. Xuejun Fan**

Department of Mechanical Engineering

Lamar University

Effects of Al Addition on the Corrosion and Mechanical Properties of NbTaTiV High Entropy Alloy.

3:00 PM

Nafiz Ahmed Badhan

Major in Mechanical Engineering

Co-authors: **S M Yeasin Habib^{\$}, Zhe Fan^{*,*}, Saifur Rahman[#] and Ahmad Amiri[%]**

^{\$} Department of Mechanical Engineering, Lamar University

[#] ATSP Innovations Inc., Houston

% Russell School of Chemical Engineering, The University of Tulsa

Mentor: **Dr. Xuejun Fan**

Department of Mechanical Engineering

Lamar University

Corrosion Protection Performance of Aromatic Thermosetting Copolyester Coatings on Steel in 3.5 wt.% NaCl Solution.

**Short Films by Red Beak Productions Students:
Communication & Media Short Film Showcase**

Chairs: Professors O'Brien Stanley and Andre Favors

Galloway 124

Poster Session III 3:15 – 3:45 PM

Chair: Dr. Gina Hale and Dr. Douglas Williams



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**Transfer to Archer – Physics bldg.
Auditorium – room 108**

4:00 PM

Introduction of our guest speaker Dr. Levi Snowden by Dr. Tracy Benson,
Professor of Chemical Engineering at Lamar University

4:05 – 4:45 PM

Mr. Levi Snowden – R & D Project Manager

Plasma Innovations & Thriving Through Small Business Research.

4:00 PM

Introduction of our guest speaker Mr. Caleb Gordon by Mr. Alexander Schiller,
Project Engineer at BOEING Company

4:05 – 4:45 PM

Mr. Caleb Gordon – Supply Chain Specialist
**BOEING “First Responder”: How Preparation & Readiness Shape Your
Future Career.**

5:15 – 5:30 PM Conference Awards Ceremony

Archer 108

5:30 – 6:00 PM U.R.G. Awards Ceremony

Archer 108



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2024-25 U.R. Grant Winners

1

Natalie Bean^{\$} | Nursing |

Mentor: Dr. Gina Hale

JoAnne Gay Dishman School of Nursing

HASBSEB Project: "Generating Educational Materials on Firearm Safety:
Action to Promote Public Safety."

2

Brianna Magdaleno | Biology |

Mentor: Dr. Kole Kubicek

Department of Biology

STEM Project: "*Optimizing Acid-Free Clearing and
Double Staining for Small Vertebrate Skeleton.*"

3

Allison Deras | Speech and Hearing Sciences |

Mentors: **Dr. Priyanka Jaisinghani**

Department of Speech and Hearing Sciences

HASBSEB Project: "Classroom Seating and Auditory Capabilities in Students with Hearing Loss ."

4

Alexa Heng ^{\$} | Sociology |

Mentors: **Dr. Sheila Springer** and **Dr. Nicki Michalski**

Department of Communication and Media

HASBSEB Project: "Navigating Sexual and Emotional Communication in Generation Z
University Situationships."

5

Ali Nikbin [%] | Accounting and Finance |

Abrar Rahman [%] | Electrical Engineering |

[%]Texas Academy Student

Mentors: **Dr. Gevorg Sargsyan** and **Dr. Don Warren**

Department of Accounting and Finances

HASBSEB Project: "Improving the Construction Permitting Process in SETX through
Technological Integration."



OFFICE OF UNDERGRADUATE RESEARCH
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2024-25 U.R. Grant Winners

6

Mololuwa Oloyede % | Electrical Engineering |

Mentor: **Dr. Cagatay Tokgoz**

Phillip M. Drayer Department of Electrical and Computer Engineering

STEM Project: "A Comparative Study of Monopole Antennas Using Various Simulation Methods."

7

Austin Robertson | Computer Science |

Mentor: Dr. Jane Liu

Department of Computer Science

STEM Project: "Predicting Future Deforestation Hotspots Using Deep Learning and Satellite Image."

8

Jason Withers | Physics |

Mentor: Dr. Cristian Bahrim

Department of Physics

STEM Project: "Fundamentals of Light-Matter Interaction for Explaining Optical Phenomena."

9

Jacob William Smith | Mechanical Engineering |

Mentor: **Dr. Sushil Doranga**

Research in Mechanical Vibrations

Project: "Evaluation of Pin Fretting in the Electronic Connectors Using the Vibration Shake"

10

Allison Stinson | Interdisciplinary Studies EC-6 |

Mentor: **Dr. Yan Yan**

Department of Curriculum and Instruction

HASBSEB Project: "Enhancing Student Behavior and Engagement through Whole Brain Teaching in an Elementary English Language Arts Classroom."

11

Jenny Xiaoxuan Tu \$ | Exercise Science |

Mentor: **Dr. Shannon Jordan**

Department of Health and Kinesiology

STEM Project: "Landing Mechanics and Muscle Activation in Modern Dancers."

Posters

Posters to be set up Thursday 11/14 after 3:00 PM
and set down Friday at 6:00 PM

Poster session I : 8:00 – 8:45 AM (Chairs Dr. Millicent Musyoka and Dr. Thinesh Selvaratnam)

Poster session II : 12:30 – 1:00 PM (Chairs Dr. Nicki Michalski and Dr. Sujing Wang)

Poster session III : 4:00 – 4:30 PM (Chairs Dr. Gina Hale and Dr. Douglas Williams)

Poster 1

Presenter: Kayode Adeoye [§]

/ GR-S / In progress / Welch project

Major: Chemistry and Biochemistry

Email: kadeoye@lamar.edu

Mentor: Dr. Paul Bernazzani [§]

[§] Department of Chemistry and Biochemistry, Lamar University

Investigating the Potential of an Amylose/Pectin Composite for Organic Contaminants Remediation.

Poster 2

Presenter: Temitope Haleemat Adisa [§]

/ GR-S / Early phase / Welch project

Major: Chemistry and Biochemistry

Email: tadisa@lamar.edu

Mentor: Dr. Paul Bernazzani [§]

[§] Department of Chemistry and Biochemistry, Lamar University

Investigating the Addition of Nanoparticles to the Melting Temperature of PEEK.

Poster 3

Presenter: Ramya Gollamudi [§]

/ UG-S / In progress / Master project

Major: Chemistry and Biochemistry

Email: rgollamudi@lamar.edu

Mentor: Dr. Sylvestre Twagirayezu [§]

[§] Department of Chemistry and Biochemistry, Lamar University

Perfluorooctanoic Acid Monohydrate (PFOA-H₂O) Studied by Molecular Rotational Resonance (MRR) Spectroscopy.

Poster 4

Presenter: Nimra Usman [§]

/ GR-S / In-progress / Center for Resiliency project

Major: Chemical Engineering

Email: nusman@lamar.edu

Mentor: Dr. Daniel Chen [§]

Co-author: Dr. Phil Cole [#]

[§] Dan F. Smith Department of Chemical and Biomolecular Engineering, Lamar University

[#] Department of Physics, Lamar University

CFD Modeling of Methane Gas Release from an underground pipeline.

Poster 5

Presenter: Shanzidul Ahmed [§]

/ GR-S / Early phase / Master project

Major: Mechanical Engineering

Email: sahmed20@lamar.edu

Mentor: Dr. Xianchang Li [§]

[§] Department of Mechanical Engineering, Lamar University

A Numerical Analysis of Engine Characteristics with Biodiesel.

Poster 6

Presenter: Mitchell B Fountain [§]

/ GR-S / Early phase / Center for Resiliency project

Major: Mechanical Engineering

Email: mfountain4@lamar.edu

Mentor: Dr. Liv Haselbach [#]

Co-author: Hossein Hariri Asli [#]

[§] Department of Mechanical Engineering, Lamar University

[#] Department of Civil and Environmental Engineering, Lamar University

Preliminary Study of Temperature Variations within Pervious Concrete-Aggregate Systems.

Poster 7

Presenter: Yuyi Pei [§]

/ GR-S / In progress / Center for Resiliency project

Major: Mechanical Engineering

Email: ypei@lamar.edu

Mentor: Dr. Qin Qian [#]

Co-author: Dr. Xianchang Li [§]

[§] Department of Mechanical Engineering, Lamar University

[#] Department of Civil and Environmental Engineering, Lamar University

Modeling Climate Change Impacts on Southeast Texas Coast waterbodies.

Poster 8

Presenter: Roseline Sogbuyi [§]

/ GR-S / Early phase / Center for Resiliency project

Major: Civil Engineering

Email: rsogbuyi@lamar.edu

Mentor: Dr. Liv Haselbach [§]

Co-author: Mitchell Fountain [#]

[§] Department of Civil and Environmental Engineering, Lamar University

[#] Department of Mechanical Engineering, Lamar University

Preliminary Study of Vibrations in Rainfall Distribution in Southeast Texas.

Poster 9

Presenter: Golnoosh Toosi ^{\$} / UG-S / In progress / Master project
Major: Civil and Environmental Engineering
Email: gtoosi@lamar.edu
Mentor: Dr. Xing Wu ^{\$}
Co-authors: Minhajul Abedin Tajik ^{\$}, and Dr. Victor A. Zaloom [#]
^{\$} Department of Civil and Environmental Engineering, Lamar University
[#] Department of Industrial Engineering, Lamar University

Study of Ships' Travel Delay in Staying Turning Basins in Deep-draft Inland Waterways: Application to Sabine-Neches Waterway.

Poster 10

Presenter: Md Rashedul Islam ^{\$} / GR-S / In progress / Master project
Major: Mechanical Engineering
Email: mislam23@lamar.edu
Mentors: Dr. Xianchang Li ^{\$} and Dr. Jenny Zhou ^{\$}
^{\$} Department of Mechanical Engineering, Lamar University

Stress Analysis of Piping with Expansion Loops by Using Finite Element Method.

Poster 11

Presenter: Rasmila Lama ^{\$} / GR-S / In progress / Master project
Major: Management Information Systems
Email: rlama@lamar.edu
Mentor: Dr. Jing Zhang [#]
Co-author: Birbal Tamang [#]
^{\$} Department of Information Systems, Lamar University
[#] Department of Computer Science, Lamar University

Mixed Reality Flood Simulation and Analysis at Lamar University.

Poster 12

Presenter: Mengjie He ^{\$} / GR-S / Advanced / Doctoral project
Major: Industrial and Systems Engineering
Email: mhe@lamar.edu
Mentor: Dr. Xinyu Liu ^{\$}
Co-authors: Qin Qian [#], and Jing Zhang [%]
^{\$} Department of Industrial and Systems Engineering, Lamar University
[#] Department of Civil and Environmental Engineering, Lamar University
[%] Department of Computer Science, Lamar University

Dissolved Oxygen Prediction Using Long Short-Term Memory-Based Deep Learning Models with Recurrent Transfer Learning.

Poster 13

Presenter: Robert Reinartz [§] / UG-S / In progress / Independent project
Major: Mathematics
Email: reinartzr1@gator.udh.edu
Mentor: Dr. Katarina Jegdic [§]
Co-authors: Christina Hamilton [§], Justin Cline [§], and Jabari Fowler [§]
[§] Scholar's Academy, University of Houston – Downtown

Using Artificial Neural Network Models to Understand and Predict Baseball.

Poster 14

Presenter: Kaitlyn Timmons [§] / GR-S / Advanced / Medical research
Major: Medical degree
Email: katimmon@utmb.edu
Mentor: Dr. Lauren Richardson [#]
Co-authors: Souvik Paul [#], Rheanna Urrabaz-Garza [#], Jeena Jacob [#], Pilar Flores [#], Ananth Kammala [#] and Ramkumar Menon [#]
[§]John Sealy School of Medicine, The University of Texas Medical Branch at Galveston
[#] Division of Basic Science and Translational Research, Department of Obstetrics and Gynecology, The University of Texas Medical Branch at Galveston

Exosomal Interleukin-10 (eIL-10), a Novel Anti-Inflammatory Therapeutic for Preterm Birth: Evaluation of Cell-Secreted Metabolites at the Placenta and Fetal Membrane Fetal-Maternal Interfaces.

Poster 15

Presenter: Victoria Taylor [§] / STEM / Early phase
Major: Undeclared
Email: vicrain1603@gmail.com
Mentor: Dr. Lauren Richardson [§]
Co-authors: Briana Ortiz [#], Ashley Driscoll [#], Sungjin Kim [%], Po Yi Pam [%], Arum Han [%] and Ramkumar Menon [#]
[§] Wellborn Middle School, College Station
[#] Department of Obstetrics & Gynecology, Division of Basic Science and Translational Research, The University of Texas Medical Branch at Galveston
[%] Department of Electrical and Computer Engineering, Department of Biomedical Engineering, Texas A&M University, College Station

Novel Organ-On-Chip Devices for Modeling Reproduction and Pregnancy-Related Organ.

Poster 16

Presenter: Celeste Traub [§] / GR-S / Early phase / Independent research
Major: Medical degree
Email: cwtraub@utmb.edu
Mentor: Dr. Ananth Kumar Kammala [§]
Co-authors: Sierra Wood [§], Richa Hoy [§], Batul Shakir [§], Lauren Richardson [§], and Ramkumar Menon [§] (*Equal contribution of authors*)
[§] Division of Basic Science and Translational Research, Department of Obstetrics and Gynecology, The University of Texas Medical Branch at Galveston

In-Silico Evaluation of FDA-Approved Compounds for Safe Use in Pregnancy: Targeting Preterm Birth Prevention.

Poster 17

Presenter: Emily Ross ^{\$}

/ GR-S / In progress / Welch project

Major: Chemistry

Email: eross4@lamar.edu

Mentor: Dr. T. Thuy Minh Nguyen ^{\$}

^{\$} Department of Chemistry and Biochemistry, Lamar University

Study of the Effects of Zinc Oxide Nanoparticles on *Candida parapsilosis* Cellular Growth.

Poster 18

Presenter: Anusha Shahzeb Meghani ^{\$}

/ GR-S / In progress / Welch research

Major: Chemistry

Email: ameghani2@lamar.edu

Mentor: Dr T. Thuy Minh Nguyen ^{\$}

^{\$} Department of Chemistry and Biochemistry, Lamar University

Zinc Oxide Nanoparticles Impede Reduce the Biosynthetic Production of Ergosterol in *Candida albicans*.

Poster 19

Presenter: Olatunji Ogunjobi ^{\$}

Major: Chemistry

Email: oogunjobi@lamar.edu

Mentor: Dr. Paul Bernazzani ^{\$}

Co-author: Dr T. Thuy Minh Nguyen ^{\$}

^{\$} Department of Chemistry and Biochemistry, Lamar University

Blending Biocompatible Polymers for Potential Biomedical Applications.

Poster 20

Presenter: Hannah Albarran ^{\$}

/ UG-S / In progress / Independent research

Majors: Neuroscience, Psychology

Email: hannahca333@gmail.com

Mentor: Dr. Llyod Lumata ^{\$.#.%}

^{\$} Department of Physics, University of Texas at Dallas, Richardson

[#] Department of Bioengineering, University of Texas at Dallas, Richardson

[%] Department of Neuroscience, University of Texas at Dallas, Richardson

¹³C NMR Spectroscopic Analysis of Glycolytic and TCA Cycle Dysregulation in Cancer Cells.

Poster 21

Presenter: Jakub Formella ^{\$.#}

/ GR-S / In progress / Welch & DoD project

Major: Neuroscience

Email: jaf210005@utdallas.edu

Mentor: Dr. Llyod Lumata ^{\$.#.%}

^{\$} Department of Physics, University of Texas at Dallas, Richardson

[#] Department of Bioengineering, University of Texas at Dallas, Richardson

[%] Department of Neuroscience, University of Texas at Dallas, Richardson

Utilizing ^{13}C NMR Spectroscopy to Investigate Krebs Cycle Dynamics with $[2-^{13}\text{C}]$ D-Glucose in Glioblastoma Cell Lines U87 and LN18.

Poster 22

Presenter: Jiya Khatri [§]

/ UG-S / In progress / Independent project

Email: jiyakhatri10@gmail.com

Major: Cognitive Science

Mentor: Dr. Llyod Lumata ^{§, #, %}

[§] Department of Physics, University of Texas at Dallas, Richardson

[#] Department of Bioengineering, University of Texas at Dallas, Richardson

[%] Department of Neuroscience, University of Texas at Dallas, Richardson

NMR Analysis of Lactate Production via Alanine Metabolism in Pancreatic Ductal Adenocarcinoma Cells.

Poster 23

Presenter: Christopher St. Julian [§]

/ UG-S / In progress / TEAM-UP project

Major: Physics

Email: cstjulian@lamar.edu

Mentor: Dr. Bogdana Bahrim

[§] Department of Physics, Lamar University

Charge Transfer During H^+ Collisions With Au(111) Surfaces

Poster 24

Presenter: Rishi Bharadwaj [§]

/ GR-S / Advanced / Doctoral project

Major: Electrical and Computer Engineering

Email: rbharadwaj@lamar.edu

Mentor: Dr. Cristian Bahrim ^{#, §}

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