

University of Delaware

**Undergraduate Research Winter Showcase, Scholarly and Creative Works**

February 15, 2023

Welcome to the Undergraduate Research Winter Showcase! Please find below a scheduled list of our wonderful presenters. Thank you for attending, and please take a boxed lunch at your own convenience.

**12:00-12:10: Introduction/Setting Up**

**12:15-12:35: 1st Lightning Talk**

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| Adam Bonar | Assessing the Impact of Hyperglycemia and Dyslipidemia on the Endothelial Glycocalyx: Expression of CD36 and Syndecan-1 |
| Alexandra Schaffer | Transgelin and Alpha Smooth Muscle Actin Interactions in Lung and Aorta Cells |
| Laura Weinstein | The Effect of Triton X-100 on PEG-PLGA Nanoparticles |
| Luke Fracek | Testing RNA Polymerases for their Ability to Use NAD+, NADH as Non-Canonical Initiating Nucleotides |
| Qi Zhang | Engineering Peptides and Hydrogels with Controlled Degradation for Biological Applications |
| Shannon Rosen | Semi-Automated Intervertebral Disc Segmentations of Scoliotic Subjects |

**12:40-1:00: 1st Poster Session**

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| Anoushka Buddhikot | Improving Biocatalysis Techniques in the Synthesis of Droxidopa |
| Jan Ahmed | Expander Graph |
| Alyson Molnar | The Interactive Effects of Prenatal Substance Exposure and Maternal Nurturance on Infant Brain Morphology |
| Caroline Bowers | Examining the Tropic Ecology of Clearnose Skates in Delaware Bay Using Stable Isotope Analysis |
| Daniel Sweeney | The Stigmatizing Effects of Catholicism on the Understanding and Expression of Homosexuality Among Emerging Adult Men |
| Dhvanil Patel | Constructing a Heterostructure from MoS2 and Fe5GeTe2 Monolayers |
| Eliana Schulman |  |
| Emma Archer | Associations Between Food Insecurity and Sleep in Preschool Children and their Parents |
| Emma Hudgins | Endothelial Cell Metabolism in Obesity |
| Erica Schoenfeld | The Effect of NAD 5’-Capping of RNA on Plasmid Replication in E.coli |
| Gianna Metzger | Secretory Immunoglobulin A’s Effect on Cyathostomin Infection in the Equine |
| Ishika Govil | Expanding the Genetic Code of Bacteria by Engineering Enzymes to Incorporate New Amino Acids |
| Jacob Hewes | Effects of Cell Migration on Polyethyleneimine/DNA Polyplex Transfection Efficacy and MechanismEffects of Cell Migration on Polyethyleneimine/DNA Polyplex Transfection Efficacy and Mechanism |
| Jenna Loquercio | The Impact of Surgical Masks on Emotion Perception and Gender Identification |
| Jenna Tomasch | FASH-A-LETES: Understanding High-Performance Sportswear Design and Research from the Inside Out |
| Jessica Pidgeon |  |
| John Salsina-Tobias | Impact of vitamin B12 on the chemotaxis of C. elegans expressing neuronal amyloid-beta |

**1:05-1:30: 2nd Lightning Talk**

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| Aimes Skewers | Epigenetic Effects of a Spinal Cord Injury in Early Life |
| Amanda Reed | The Impact of Commitment on Allyship Behavior Toward the LGBTQ+ Community |
| Catherine Clark |  |
| Leah Colaizzi | A Visual Guide for Your Lungs |
| Obed Usenbor | The Effects Context has on Intuitive Learning |
| Slade Goldman | “ChemisTree”: A novel, interactive chemistry game to teach students about The electron configurations of atoms and ions |
| Willa Lane |  |

**1:35-1:55: 2nd Poster Session**

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| Alexia Scotto | The Combination of Painting and Ceramics |
| Lindsey Wang | Towards 3D Image Rendering From 2D Drone Image Captures |
| Rory Raymer | Optimizing In-Vitro Cultivation Techniques for Protozoans of the Equine Hind-gut |
| Sarah Gustafson |  |
| Miguel Prysakar | The epigenetic effect of maternal buffering in rodent pups exposed to a predator odor |
| Shivam Chauhan | Advancing Simple Forward Design with Tandem CFD and Simulink of Flow Structuring Hierarchal Materials for Soft Actuator Applications |
| Silo Murphy | K-profile Analysis of Linear Operators |
| Sophie Olson | Determining TRMT1-Protein Interaction Partners through Proximity Labeling |
| Srinikhita Bomasamudram | Potential cADPR Binding Partners and their Significance in the Thoeris System |
| Talia Collier | Pomegranate peel metabolite analysis through liquid chromatography-mass spectrometry |
| Talia Gillespe | The Association Between Actors’ Behavior and Relationship Quality on Partners’ Reaction |
| Wendy Sanches-Rodriguez | Examining effects of Attachment and Biobehavioral Catch-up on mothers with histories of opioid-use |
| Zsanaia Queen Badiang | Ex Vivo Culture of Mouse Femoral Heads Results in Osteoarthritis-like Gene Expression |
| Denise Becker |  |
| Madeline Downer | Lenape Edible Forest Garden |
| Elina Rodriguez and Daria Willis | Effects of Maternal Immune Activation on Embryonic Day 15 on the Maternal and Fetal Immune Response |

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