



VANDERBILT UNIVERSITY
Office of Experiential Learning
and Immersion Vanderbilt

Undergraduate Research Fair

Thursday, November 9, 2023
3:30–6:00 p.m.

SCHEDULE OF EVENTS

3:30–4:20 p.m. Research Fair, Group A

4:20–4:40 p.m. Intermission

4:40–5:30 p.m. Research Fair, Group B

5:40 p.m. Remarks and Award Ceremony led by Provost and
Vice Chancellor for Academic Affairs C. Cybele Raver

Presentations – Group A

Zoe Abel '24 Medicine, Health and Society; Child Development	 From 'helping peers succeed' to 'struggling to develop research questions': Factors that contribute to and detract from science identity in undergraduate learning assistants <i>Mentor: Professor Cynthia Brame, Biological Sciences</i>	Posterboard No. 1
Rosana Alfaro '24 Biomedical Engineering	Plasmonic Cycling of Adaptive PCR through Heating of Gold Nanorods activated by Infrared Light <i>Mentor: Professor Rick Haselton, Biomedical Engineering</i>	Posterboard No. 2
Lilian Baker '24 Medicine, Health and Society; Anthropology	 From 'helping peers succeed' to 'struggling to develop research questions': Factors that contribute to and detract from science identity in undergraduate learning assistants <i>Mentor: Professor Cynthia Brame, Biological Sciences</i>	Posterboard No. 3
Samaya Baljepally '24 Political Science; Biological Sciences	 Development of a Novel Cannula for Durable Venovenous Extracorporeal Membrane Oxygenation <i>Mentor: Professor Carl Johnson, Surgical Research</i>	Posterboard No. 4
Jack Boylan '24 Biochemistry	 Developing a toolbox of anti-Cas9 nanobodies <i>Mentor: Professor Benjamin Spiller, Pharmacology</i>	Posterboard No. 6
Jose Leonardo Brenes '24 Mechanical Engineering	 Developing a fall detection algorithm for a fall prevention wearable thruster <i>Mentor: Professor Michael Goldfarb, Mechanical Engineering</i>	Posterboard No. 7
Amar Camara '25 Neuroscience; Psychology	Brain Structure of Children in Single-Parent Households: Beyond SES <i>Mentor: Professor Antonia Kaczurkin, Psychological Sciences</i>	Posterboard No. 8
Abigail Carr '25 Neuroscience	 Sex Differences in GABA Regulation of Dopamine Release in the Nucleus Accumbens and its Role in Cocaine Use Disorder <i>Mentor: Professor Erin Calipari, Pharmacology</i>	Posterboard No. 163
Justin Cartailer '24 Biochemistry and Chemical Biology	Investigating T cell dysfunction in myeloid malignancies <i>Mentor: Dr. P. Brent Ferrell, Medicine</i>	Posterboard No. 9
Sophia Chung '24 Cognitive Studies; Neuroscience	Gut Wrenching: The Dangers of Gut Dysbiosis and Metabolic Dysregulation <i>Mentor: Professor Mary Carskadon, Psychiatry and Human Behavior</i>	Posterboard No. 11
Dylan Conger '25 Neuroscience; Biochemistry and Chemical Biology	Engineered Cellular Responses to Tauopathies <i>Mentor: Professor Jonathan Brunger, Biomedical Engineering</i>	Posterboard No. 12

Ommay Farah '25 Neuroscience	Analyzing Binding between Iron Sulfur Cluster Protein 1 (ISCA1) and Tepsin VHS: Potential Significance to Mitophagy <i>Mentor: Professor Lauren Jackson, Biological Sciences</i>	Posterboard No. 13
Nathan Fiedeldey '25 Biochemistry and Chemical Biology	 Experimental Evolution of E. Coli <i>Mentor: Professor Megan Behringer, Biological Sciences</i>	Posterboard No. 14
Jada Finley '24 Child Development	Relation Between Parental History of Depression and Adolescent Reward Response <i>Mentor: Professor Autumn Kujawa, Psychology and Human Development</i>	Posterboard No. 15
Ralph Francois '25 Psychology	Seasonal Shifts in Adolescent Suicidality during COVID-19 <i>Mentor: Professor Adam Bear, Psychology</i>	Posterboard No. 33
Isabella Gomez '25 Communication of Science and Technology	 To Sea or Not to Sea: Dietary Ecology of Enhydritherium Terraenovae as Inferred from Dental Microwear Texture Analysis <i>Mentor: Professor Larisa DeSantis, Biological Sciences</i>	Posterboard No. 34
Diego Gomez Lopez '24 Medicine, Health and Society	Ketamine Liposome Formulation Optimization <i>Mentor: Dr. Raag Airan, Radiology</i>	Posterboard No. 35
Elisa Holtzman '24 Biomedical Engineering	 Changes in Outdoor Running Kinematics with Ankle Exoskeleton: Xsens DOT IMU Analysis <i>Mentor: Professor Karl Zelik, Mechanical Engineering</i>	Posterboard No. 24
Chloe Hord '24 Psychology; French	The Examination of Disgust as a Predictor of Behavioral Avoidance Following Augmented Exposure for Snake Phobia <i>Mentor: Professor Bunmi Olatunji, Psychology</i>	Posterboard No. 36
Liyu Huang '24 Neuroscience; Architecture; Medicine, Health and Society	 Cadaveric Study of an Augmented Reality Guidance System for Locating Close / Positive Margins in Head and Neck Cancer Surgery <i>Mentor: Dr. Michael Topf, Otolaryngology</i>	Posterboard No. 72
Lillian Hubbard '24 Molecular and Cellular Biology; Medicine, Health and Society	The Suspected Role of Non-epithelial Cells Embedded within the Vocal Fold Epithelial Barrier <i>Mentor: Professor Emily Kimball, Hearing and Speech Sciences</i>	Posterboard No. 125
Isabella Jackson '24 Psychology	Differentiating the unique and combined effects of multiple-context and multiple-stimulus cues in exposure therapy: A behavioral investigation of inhibitory retrieval <i>Mentor: Professor Bunmi Olatunji, Psychology</i>	Posterboard No. 75

Presentations – Group A

Anissa Jayathilake '24 Medicine, Health and Society; Economics	To test whether the inducible secretory pathway marker ESCargo is co-packaged with insulin into secretory vesicles in the insulinoma cells, MIN6 <i>Mentor: Professor Guoqiang Gu, Cell and Developmental Biology</i>	Posterboard No. 76
Chen Jin '24 Medicine, Health and Society; Economics	 Exploring Racial and Gender Differences in Opioid Use Disorder Phenotyping in Electronic Health Records <i>Mentor: Professor Alvin Jeffery, Population Health and Systems</i>	Posterboard No. 77
Solathus Johnson '24 Biochemistry and Chemical Biology	Uncovering MAGEB2 Function Using Unbiased Proteomics and Interaction Analysis <i>Mentor: Professor Hemant Badgandi, Biological Sciences</i>	Posterboard No. 78
Nikhita Joshi '24 Biological Sciences; Medicine, Health and Society	Assessing the Role of IL-17 in Maintaining Barrier and Homeostatic Function in Epithelial Cells <i>Mentor: Professor Holly Algood, Medicine</i>	Posterboard No. 79
Steve Jung '26 Computer Science	 Augmented Reality Guidance for Tumor Resection following Neoadjuvant Radiation Therapy for Sarcoma <i>Mentor: Professor Jie Ying Wu, Computer Science</i>	Posterboard No. 80
Jinsun Kim '24 Chemistry; Medicine, Health and Society	 Elucidating how a mutation in the TALK-1 potassium channel (TALK-1 R13Q) causes neonatal diabetes <i>Mentor: Professor David Jacobson, Molecular Physiology and Biophysics</i>	Posterboard No. 81
Jakub Kubina '25 Neuroscience	 Novel LRH-1 Endogenous Ligand Discovery Protocol <i>Mentor: Professor Ray Blind, Pharmacology</i>	Posterboard No. 82
Aditya Kurre '25 Biological Sciences	Dietary Abrasives and Enamel Wear in Ancient Humans <i>Mentor: Professor Larisa Desantis, Biology</i>	Posterboard No. 83
Chloe Le '25 Molecular and Cellular Biology; Medicine, Health and Society	 Effect of Hyperglycemia on Matrix Contraction on Cancer-Associated Fibroblasts <i>Mentor: Professor Cynthia Reinhart-King, Biomedical Engineering</i>	Posterboard No. 84
Daniel Liu '26 Biomedical Engineering	 Low-Cost fNIRS Headset for Post-Operative Delirium Neuromonitoring in Cardiac Surgery Patients <i>Mentor: Professor Audrey Bowden, Biomedical Engineering</i>	Posterboard No. 85
Helen Loda '24 Biochemistry	Uncovering MAGE B2 function using unbiased proteomics and interactome analysis <i>Mentor: Professor Hemant Badgandi, Biochemistry and Chemical Biology</i>	Posterboard No. 78
Jordan (McKay) Lucas '25 Child Studies	 Sociomoral Evaluation in Infants <i>Mentor: Professor Deon Benton, Psychology and Human Development</i>	Posterboard No. 87

Mehak Malhotra '25
Human and Organizational
Development; Psychology

 **The Relationship between Perfectionism and Suicide Risk in Adolescents**

Mentor: Professor Alex Bettis, Psychology

Posterboard No.
88

Jacob Myers '25
Biochemistry and Chemical Biology;
Communication of Science and
Technology

 **Metabolic Tools to Prevent Obesity-Mediated Adipose Dysfunction**

Mentor: Professor Elma Zaganjor, Molecular Physiology and Biophysics

Posterboard No.
22

Akhil Nair '24
Medicine, Health and Society;
Neuroscience

Unraveling the Hidden Beauty of the Microscopic World with the Power of Deep Learning

Mentor: Professor Tomas Kirchhausen, Cell Biology, Cellular and Molecular Medicine

Posterboard No.
89

Tyler Oddo '24
Chemical Engineering

Solvent-Resistant Thin Film Composite Membranes by Polymerizing Partially Fluorinated Monomers During Spin Coating

Mentor: Professor Kane Jennings, Chemical and Biomolecular Engineering

Posterboard No.
91

Margaret O'Rourke '24
History; Medicine, Health and
Society

 **Regulation of Fasting Blood Glucose Levels**

Mentor: Professor Richard O'Brien, Molecular Physiology and Biophysics

Posterboard No.
92

Brooke Poston '24
Human and Organizational
Development; Psychology

 **Parent Early Home Math Support: Comparing Open-Ended Examples and Reported Activities on a Survey**

Mentor: Professor Bethany Rittle-Johnson, Psychology

Posterboard No.
93

Helen Qian '24
Neuroscience

 **Electrical Microstimulation Alters Burst Rate and Sequence Structure of Neuronal Spiking Activity in the Human Cortex**

Mentor: Dr. Kareem Zaghloul, Neurological Surgery

Posterboard No.
94

Jeevan Rajkumar '24
Chemistry; Spanish

Site Selective O-Functionalization of Carbohydrates

Mentor: Professor Daria Kim, Chemistry

Posterboard No.
95

Brina Ratangee '24
Medicine, Health and Society;
Neuroscience

Association between ejection fraction and brain health biomarkers varies cross-sectionally by level of neighborhood disadvantage

Mentor: Professor Kelsie Full, Epidemiology

Posterboard No.
96

Julia Red Wing '25
Medicine, Health and Society;
Human and Organizational
Development

 **Healthcare Providers' Knowledge, Attitudes and Barriers on Trauma-Informed Care (TIC) for Pediatric Medical Trauma Stress (PMTS) in the United States**

Mentor: Professor Jessika Boles, Psychology and Human Development

Posterboard No.
97

Presentations – Group A

Alexander Renkis '24 Human and Organizational Development; Spanish-Portuguese	Academic and Abstinent Ambitions: Qualitative Analysis of Recovery High School Students' Self-Identified Goals <i>Mentor: Professor Andrew Finch, Human and Organizational Development</i>	Posterboard No. 164
Alexis Richmond '24 Child Development, Psychology	 Parental Mathematics Support Through Pattern Activities and Talk <i>Mentor: Professor Bethany Rittle-Johnson, Psychology and Human Development</i>	Posterboard No. 98
Elizabeth Rios '25 Medicine, Health and Society	 Pets and Positive Psychology <i>Mentor: Professor Ashleigh Maxcey, Psychology</i>	Posterboard No. 99
Celia Roberto '24 Psychology	 Neural Measures of Reward Responsiveness and Adolescent Suicide Risk <i>Mentor: Professor Autumn Kujawa, Psychology and Human Development</i>	Posterboard No. 100
Tristan Sealy '24 Biochemistry	Acute Auxin Induced Degradation of Ede1 <i>Mentor: Professor Jason Macgurn, Cellular Biology</i>	Posterboard No. 165
Krishna Shah '24 Psychology	The Relationship Between Trauma Exposure and Memory Impairment: The Mediating Effect of Anxiety, Depression and Sleep Disturbance <i>Mentor: Professor Antonia Kaczurkin, Psychological Sciences</i>	Posterboard No. 39
Krish Shah '24 Cognitive Studies; History of Art	Predicting Longitudinal Cognition using Baseline Standardized Cerebral Blood Flow <i>Mentor: Professor Angela Jefferson, Neurology</i>	Posterboard No. 47
Muhammad Shameer '26 Molecular and Cellular Biology; Medicine, Health and Society	Peritoneal cavity-on-chip bioreactor as a model to study peritoneal metastasis under varying peritoneal micro-environments <i>Mentor: Dr. Kamran Idrees, Surgical Oncology</i>	Posterboard No. 101
Saksham Sharma '25 Mechanical Engineering	Bio-inspired Soft-bodied Robotic Pump for Transportation of Viscous Fluid and Solid Cargos <i>Mentor: Professor Xiaoguang Dong, Mechanical Engineering</i>	Posterboard No. 102
Shreyash Singh '26 Cognitive Studies	Identification of Data Characteristics in Biomedical Entity Relations in Journal Articles: Data Descriptions of BioRED <i>Mentor: Professor Islamaj Rezarta, Computer Science</i>	Posterboard No. 46
Umar Sohail Qureshi '25 Computer Science; Mathematics; Physics	 Probing a GeV-scale Scalar Boson and a TeV-scale Vector-like Quark in the U(1)T3R BSM Extension at the Large Hadron Collider using Machine Learning <i>Mentor: Professor Alfredo Gurrola, Physics and Astronomy</i>	Posterboard No. 44

Amy Song '25 Biochemistry and Chemical Biology	 Active Learning Strategies for Efficient Growth of BGC Database	Posterboard No. 43
	<i>Mentor: Professor Allison Walker, Chemistry</i>	
Jiachen Sun '24 Biochemistry and Chemical Biology; Medicine, Health and Society	Assessing the Impact of Summer Camp on Youth Development	Posterboard No. 103
	<i>Mentor: Professor Jaime Bruce, Medicine, Health and Society</i>	
Tigist Tilahun '25 Neuroscience; Medicine, Health and Society	 The Effects of Nonpathological Aging on Cortical Cholinergic Integrity	Posterboard No. 104
	<i>Mentor: Professor Carrie Jones, Neuroscience, Pharmacology</i>	
Sidney Vafaie-partin '24 Molecular and Cellular Biology	 Real-time monitoring of tau aggregation in a human in vitro model of tau pathology	Posterboard No. 41
	<i>Mentor: Professor Ethan Lippmann, Chemical and Biomolecular Engineering</i>	
Laura Vaughan '25 Mathematics; Economics	Sp\$-Adic Valuation Trees and Iterative Sequences	Posterboard No. 40
	<i>Mentor: Professor Olena Kozhushkina, Math and Computer Science</i>	
Jaileen Wales '25 Molecular and Cellular Biology	Plasma Membrane Localization of the P4-ATPases Dnf1 and Dnf2	Posterboard No. 38
	<i>Mentor: Professor Todd Graham, Biological Sciences</i>	
Jordan Walker '24 Chemical Engineering	Preclinical assessment of novel tocolytics to delay preterm birth in mice	Posterboard No. 21
	<i>Mentor: Professor Jennifer Herington, Pediatrics</i>	
Laura Wan '24 Neuroscience; Medicine, Health and Society	 Understanding M4 mAChR Regulation of Sleep-Wake Architecture in Young Mice	Posterboard No. 127
	<i>Mentor: Professor Carrie Jones, Pharmacology</i>	
Yinuo Wang '24 Psychology; Cognitive Studies	 Caregiver Perceptions of Pediatric Hospital-Based Bereavement Services: A Preliminary Study	Posterboard No. 105
	<i>Mentor: Professor Jessika Boles, Psychology and Human Development</i>	
Jiahe Wang '24 Psychology; Cognitive Studies	Altruistic Behavior of Children in Digital Games	Posterboard No. 106
	<i>Mentor: Professor Joshua Juvrud, Psychology</i>	
Johann West '24 Human and Organizational Development; Computer Science	Revealing Large Language Model Demographic Bias through Political Affiliation Prediction	Posterboard No. 126
	<i>Mentor: Professor Vikash Singh, Computer Science</i>	
Greyson Wintergerst '25 Computer Science; Neuroscience	From the Operating Room to the Office: Digital Staining of White Light Cystoscopy Videos for Bladder Cancer Detection	Posterboard No. 107
	<i>Mentor: Professor Audrey Bowden, Biomedical Engineering, Electrical and Computer Engineering</i>	

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Presentations – Group A

Veronica Wroblewski '24 Secondary Education; Biological Sciences	The Toxicity of Yeast Encapsulated Curcumin on Anopheles gambiae Mosquito Larvae <i>Mentor: Professor Julian Hillyer, Biological Sciences</i>	Posterboard No. 108
Jiayi Xu '25 Computer Science; Mathematics	Development of an Augmented Reality Guidance System for Head and Neck Cancer Resection <i>Mentor: Professor Jie Ying Wu, Computer Science</i>	Posterboard No. 71
Matthew Yao '25 Molecular and Cellular Biology; Psychology	 The Influence of Lipoprotein(a) and Oxidized Lipoprotein(a) on Fibrinolysis <i>Mentor: Dr. Wenliang Song, Cardiology</i>	Posterboard No. 109
Charity Yarbrough '24 Psychology; Medicine, Health and Society	The Role of Annexin A6 in the Secretion of Monocyte Chemoattractant Protein-1 in Triple Negative Breast Cancer <i>Mentor: Professor Amos Sakwe, Biochemistry and Cancer Biology</i>	Posterboard No. 110
Phoebe Young '24 Cognitive Studies; Neuroscience	Neural Adaptations in the Insular Cortex following Abstinence from Chronic Ethanol Exposure <i>Mentor: Professor Danny Winder, Molecular Physiology and Biophysics</i>	Posterboard No. 117
Gina Yu '25 Neuroscience; Medicine, Health and Society	 Developmental programming of neural circuits integrating drinking and feeding in mice <i>Mentor: Professor Richard Simerly, Molecular Physiology and Biophysics</i>	Posterboard No. 111
Sarah Zeng '26 Medicine, Health and Society; Computer Science	Analyzing Bacterial CapRel Protein Chimera Compatibility and Phage Interaction <i>Mentor: Professor Meru Sadhu, Systems Biology and Genome Engineering</i>	Posterboard No. 118
Yichi Zhang '25 Cognitive Studies	Extra-Axial Cerebrospinal Fluid Volume in Infancy and School-Age ADHD Symptomatology <i>Mentor: Professor Dea Garic, Psychiatry</i>	Posterboard No. 119
Henoc Zinga '24 Biochemistry and Chemical Biology; Economics	Investigating the Specificity of Cyclin-Dependent Kinases in Transcriptional Pause Release <i>Mentor: Professor Seychelle M. Vos, Biology</i>	Posterboard No. 166

Presentations – Group B

TiOlwanimi Adesanya '24
Medicine, Health and Society

 **The Immunological Sequelae of Novel Human-Xenogeneic Cross Circulation for the Rehabilitation of Clinically Unsuitable Donor Lungs**

Mentor: Professor Rei Ukita, Cardiac Surgery

Posterboard No.
31

Shannon Alptekin '25
Biomedical Engineering

Design and Development of a Hand Control Interface for Robotic ENT Microsurgical Systems (REMS)

Mentor: Dr. Russell Taylor, Otolaryngology

Posterboard No.
1

Maya Anderson '25
Neuroscience

 **Development of bioluminescent markers to study the properties of honey bee circadian clock neurons**

Mentor: Professor Douglas McMahon, Biology

Posterboard No.
2

Zoha Arif '25
Cognitive Studies; Computer Science

Microstructural profiles of white matter tracts connecting ventral and dorsal cortex and relation with age

Mentor: Professor Sophia Vinci-Booher, Psychology and Human Development

Posterboard No.
3

Eshani Arumalla '25
Biological Sciences; Medicine, Health and Society

 **Contrasting Pain Responsivity through spontaneous facial expression in Autistic and Neurotypical individuals**

Mentor: Professor Carissa Cascio, Psychiatry and Behavioral Sciences

Posterboard No.
44

Lohitha Basa '24
Neuroscience; Medicine, Health and Society

 **Exploring Maternal and Child Health among Tribal Communities in India: A Life Course Perspective**

Mentor: Professor Bushra Sabri, Public Health

Posterboard No.
133

Rishik Bethi '25
Neuroscience; Medicine, Health and Society

 **Characterizing How Modulating Cocaine-Activated Ensembles Affects Cocaine Related Behaviors**

Mentor: Professor Erin Calipari, Pharmacology

Posterboard No.
4

Olivia Boykin '24
Medicine, Health and Society

 **TOLL-Like Receptor Expression and Activation Following Severe Burn Injury and Infection**

Mentor: Dr. Julia Bohannon, Anesthesiology, Pathology, Microbiology, and Immunology

Posterboard No.
5

Courtney Cagnolatti '25
Medicine, Health and Society

 **An Evaluation of the Physiological Effect of Exercise in an Ovine Pulmonary Hypertension Model**

Mentor: Dr. Caitlin Demarest, Thoracic Surgery

Posterboard No.
45

Marleigh Canter '25
Molecular and Cellular Biology

 **Like Mother, Like Daughter: Leveraging the Role of Mitochondrial Inheritance to Identify Mitochondrial Epigenetic Regulators**

Mentor: Professor Maulik Patel, Biological Sciences

Posterboard No.
6

Blake Catlett '25 Chemistry	 Reverse Engineering Ancient Anishinaabe Rock Art Techniques by Analyzing Surface Chemistry <i>Mentor: Professor Janet Macdonald, Chemistry</i>	Posterboard No. 7
Mia Cecala '24 Molecular and Cellular Biology	Evaluating Novel Routes to Fosfomycin Resistance <i>Mentor: Dr. Maria Hadjifrangiskou, Pathology, Microbiology, and Immunology</i>	Posterboard No. 32
Ori Chalom '24 Biomedical Engineering	Modulating Macrophages via Novel Biomaterials to Induce Immunity Against Breast Cancer <i>Mentor: Professor Todd Giorgio, Biomedical Engineering</i>	Posterboard No. 46
Alexander Chawdhry '25 Cognitive Studies	What Makes a Bird Altricial or Precocial? <i>Mentor: Professor Suzana Herculano-Houzel, Neuroscience</i>	Posterboard No. 47
Justin Chen '24 Chemistry; Medicine, Health and Society	Structural Trend Mapping in Isocyanate-Reacted Polyurethane Oligomers using Ion Mobility Mass Spectrometry <i>Mentor: Professor David Hercules, Chemistry</i>	Posterboard No. 8
Ming Chen '24 Earth and Environmental Sciences	Understanding past glacier flow patterns in Arena Valley, Antarctica using the provenance of glacial tills <i>Mentor: Professor Dan Morgan, Earth and Environmental Sciences</i>	Posterboard No. 9
Siyuan (Sissi) Chen '25 Computer Science; Physics	 Entropy and Black Hole Physics <i>Mentor: Professor Karan Jani, Physics and Astronomy</i>	Posterboard No. 20
Maxwell Chen '27 Computer Science	SURGE: Sequential Reinforcement Graph Agents for Accelerated Therapeutic Design <i>Mentor: Professor Gina Bai, Computer Science</i>	Posterboard No. 10
Sin Man Cheung '25 Mechanical Engineering; Neuroscience	 Predicting Cognitive States from Video-Captured Touchscreen Behavior in Animals <i>Mentor: Professor Thilo Womelsdorf, Psychology</i>	Posterboard No. 164
Jeremy Clements '24 Molecular and Cellular Biology	Mechanisms underlying mesoderm induction in 2D and 3D Models using human pluripotent stem cells <i>Mentor: Professor Ian Macara, Cell and Developmental Biology</i>	Posterboard No. 26
Eric Connelly '25 Human and Organizational Development	 The Effect of Adipose Tissue TREM2-expressing Lipid Associated Macrophages on Breast Cancer Tumor Progression <i>Mentor: Professor Alyssa Hasty, Molecular Physiology and Biophysics</i>	Posterboard No. 23
Preston Crase '25 Biochemistry and Chemical Biology	Characterizing fibroblast intercellular communication influence on macrophage polarization in response to radiotherapy <i>Mentor: Professor Marjan Rafat, Chemical and Biomolecular Engineering</i>	Posterboard No. 48

Presentations – Group B

Michael DaCosta '24 Medicine, Health and Society; Psychology	 Evaluating Novel Roots to Fosfomycin Resistance <i>Mentor: Professor Maria Hadjifrangiskou, Pathology, Microbiology, and Immunology</i>	Posterboard No. 32
Enzo de Jong '25 Chemistry	 Characterization of VUAA-class Compounds as Excito-repellents <i>Mentor: Professor Laurence Zwiebel, Biological Sciences</i>	Posterboard No. 11
Julia Dominguez '25 Neuroscience	 Development of a Novel Interleukin-27 (IL-27) Targeted Gene Therapy for Therapeutic Applications <i>Mentor: Dr. Jason Schwartz, Pediatrics</i>	Posterboard No. 12
Angelina Ehara '26 Neuroscience; Medicine, Health and Society	Revealing a Role of Amino Acid Dyshomeostasis in Alzheimer's Disease Related Dementia <i>Mentor: Professor Danielle Dean, Diabetes, Endocrinology, and Metabolism</i>	Posterboard No. 13
Minoli Fernando '24 Environmental Sociology; Medicine, Health and Society	 A geospatial approach to assessing the burden of amplified risk among sensitive subpopulations to unsafe drinking water in the United States (2016-2020): A Tennessee county-level case study <i>Mentor: Professor Yolanda McDonald, Human and Organizational Development</i>	Posterboard No. 17
Jonah Finkelstein '25 Chemical Engineering	Engineering Nanobody-Drug Conjugates for Logic-Gated Immunotherapy <i>Mentor: Professor John Wilson, Chemical and Biomolecular Engineering</i>	Posterboard No. 51
Nicholas Forster-Benson '25 Economics; Quantitative Social Science (interdisciplinary)	 Zoning, Density, and Housing Affordability in the New South <i>Mentors: Professor Richard Lloyd, Sociology, and Professor Karim Nchare, Economics</i>	Posterboard No. 52
Whitman Fowlkes '25 Mathematics; Computer Science	Evolutionarily Stable Dispersal Timing: Effects of Dispersal Costs and Kin Competition <i>Mentor: Professor Theodore Galanthay, Mathematics</i>	Posterboard No. 53
Ashley Fu '26 Electrical and Computer Engineering	Energy Minimization of Robot Motion Using Custom-Designed Magnetic-Spring Actuators <i>Mentor: Professor David Braun, Mechanical Engineering</i>	Posterboard No. 14
Ishaan Gadiyar '26 Molecular and Cellular Biology	 Evaluation of Spatial Statistics Methods in Multiplexed Immunofluorescence Images of Ovarian Cancer <i>Mentor: Professor Simon Vandekar, Biostatistics</i>	Posterboard No. 15
Diego Garmendia '25 Molecular and Cellular Biology; Medicine, Health and Society	Lack of Differentiation in Cancer Risk Management Between Females with Truncating CHEK2 versus Missense CHEK2 Variants <i>Mentor: Dr. Tuya Pal, Genetic Medicine</i>	Posterboard No. 33

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Elizabeth Gatti '25
Biomedical Engineering; Electrical
and Computer Engineering

**Thalamic Structural Connectivity Alterations in
Patients with Temporal Lobe Epilepsy**

Mentor: Professor Victoria Morgan, Biomedical Engineering

Posterboard No.
34

Farshad Ghanbari '24
Biological Sciences

**Enhancing the tumor-killing potential of NK cells by
interleukin-12 released from glioblastoma cells treated
with oncolytic herpes simplex viruses**

Mentor: Professor Jianmei Leavenworth, Neurology

Posterboard No.
35

Abtin Ghelmsaraei '25
Biomedical Engineering

**Investigating the Recurrence of Head and Neck
Squamous Cell Carcinoma After Radiation Therapy**

Mentor: Professor Marjan Rafat, Chemical and Biomolecular Engineering

Posterboard No.
16

Anish Giri '25
Computer Science

**Changing Gravitational Constant during Bigbang
Nucleosynthesis**

Mentor: Professor Robert Scherrer, Physics and Astronomy

Posterboard No.
36

Gabriella Glomp '25
Biomedical Engineering

**Smart Blood Pump for Extracorporeal Membrane
Oxygenation (ECMO)**

Mentor: Professor Rei Ukita, Cardiac Surgery

Posterboard No.
73

Sarah Goldstein '26
Biomedical Engineering

Colitis protects against drug-induced liver injury

*Mentor: Professor Nicolas Chevrier, Regenerative Medicine, Nanoscience and
Technology*

Posterboard No.
74

Thomas Gonzales '24
Neuroscience

**Using a paired delayed match to sample paradigm to
examine neural predictive coding circuitry in the brain.**

Mentor: Professor Andre Bastos, Psychology

Posterboard No.
75

Sara Goodwich '25
Biomedical Engineering

**Prevalence of Developmental Disabilities in Children
Who Receive Hearing Health Care**

Mentor: Professor Angela Bonino, Hearing and Speech Sciences

Posterboard No.
54

Soenika Gorrepati '24
Medicine, Health and Society

**Language exposure in infancy and toddler expressive and
receptive vocabulary**

Mentor: Professor Kathryn Humphreys, Psychology and Human Development

Posterboard No.
18

Kira Grossman '25
Biomedical Engineering

**Investigating neuroinflammation in murine
acetaminophen-induced acute liver injury**

Mentor: Professor Aidan Falvey, Bioelectronic Medicine

Posterboard No.
76

Andrea Gutierrez '24
Biological Sciences; Anthropology

**Analysis of Stable Carbon Isotopes in Tooth Enamel to
Investigate Childhood Diets in Auquimarca, Peru**

Mentor: Professor Tiffany Tung, Anthropology

Posterboard No.
77

Presentations – Group B

Sarah Hanna '25
Molecular and Cellular Biology;
Medicine, Health and Society

 **Isolation and Characterization of a New Set of Mutations in Core Spindle Pole Body Protein Ppc89 Leads to Mitotic Defects**

Mentor: Professor Kathleen Gould, Cell and Developmental Biology

Posterboard No.
78

Sydney Hawkins '24
Neuroscience

MC3R Neurons Integrate Energy and Reproduction During Development

Mentor: Professor Richard Simerly, Molecular Physiology and Biophysics

Posterboard No.
79

Marina He '24
Molecular and Cellular Biology;
Chemistry

Development of Function Blocking Antibodies Against Thrombospondin-1 for Chronic Kidney Disease Progression

Mentor: Professor Takamune Takahashi, Nephrology and Hypertension

Posterboard No.
80

Audrey Heffernan '24
Medicine, Health and Society;
Political Science

Understanding Those At-Risk: Mental Health Diagnoses and Medication Treatment in Adolescents with Chromosome 22q11.2 Deletion Syndrome

Mentor: Dr. Janice Enriquez, Developmental Pediatrics

Posterboard No.
81

Ketan Hoey '26
Molecular and Cellular Biology

Construction of derivative IgG library and phage selection

Mentor: Professor Alexander Bick, Genetic Medicine

Posterboard No.
55

Stephanie Hood '24
Sociology

 **Wicked, Wily, or Wide-Eyed: Why modern witches continue to practice Craft in spite of misogynistic stereotypes**

Mentor: Professor Holly McCammon, Sociology

Posterboard No.
165

Charles Hopper '24
Molecular and Cellular Biology

 **Heterologous Expression of Potential Bioactive Gene Cluster as Predicted by Machine Learning**

Mentor: Professor Allison Walker, Chemistry

Posterboard No.
56

Rene Huerta '26
Molecular and Cellular Biology;
Medicine, Health and Society

Diversity in colony morphology across Saccharomycotina yeastspecies

Mentor: Professor Antonis Rokas, Biological Sciences

Posterboard No.
82

Cindy Jaramillo '26
Neuroscience

 **The Relationship between Social Anxiety and Working Memory, as Supported by Brain Structure**

Mentor: Professor Antonia Kaczurkin, Psychology

Posterboard No.
83

Mrinmoyee Kalasikam '24
Biochemistry and Chemical Biology;
Medicine, Health and Society

 **Antibiotic Overuse in Children Hospitalized with Community Onset Respiratory Viral Infections: RSV, Influenza, and SARS-CoV-2**

Mentor: Dr. Ritu Banerjee, Pediatrics

Posterboard No.
134

Bryce Keating '25
Psychology

IM Cerebrospinal Fluid Dynamics Change During Mindfulness Meditation: Implications for Understanding Health Benefits for Sleep and Meditation

Mentor: Dr. Manus Donahue, Neurology

Posterboard No.
84

Saad Khan '24
Psychology

IM American High School Obesity Interventions' Influence on Adolescent Eating Disorder Onset: A Proposal

Mentor: Dr. Jamie Pope, Nutritional Sciences

Posterboard No.
166

Brian Kim '24
Neuroscience; Medicine, Health and Society

IM Identifying Rare APOE Loss of Function and Missense Variants in Lewy Body Dementia

Mentor: Professor Sonja Scholz, Neurology and Neurogenetics

Posterboard No.
85

Bryne Knowles '25
Biomedical Engineering

Serial and Staged Microfluidic Sorting to Enable Studying the Role of Cell Size and Stiffness during Metastasis

Mentor: Professor Cynthia Reinhart-King, Biomedical Engineering

Posterboard No.
86

Ilayda Koca '25
Computer Science; Mathematics

IM Unified Framework for Human Object Interaction Detection with Object Detection and Visual Question Answering

Mentor: Professor Gautam Biswas, Computer Science

Posterboard No.
87

Heera Kodyamplakkal '24
Medicine, Health and Society

IM Abdominal Adiposity and MetS Risk: Analyzing the Critical Biomarkers of Metabolic Syndrome in Young Adults

Mentor: Professor Heidi Silver, Vanderbilt Diet, Body Composition, and Human Metabolism Core

Posterboard No.
88

Adeel Koshal '24
Molecular and Cellular Biology

Exploring the Mechanisms and Regulation of Trans-endocytosis

Mentor: Dr. Ian Macara, Cell and Developmental Biology

Posterboard No.
89

Abi Kothapalli '25
Computer Science; Mathematics

IM Learning-Based Heuristic for Combinatorial Optimization of the Minimum Dominating Set Problem

Mentor: Professor Xenofon Koutsoukos, Computer Science

Posterboard No.
90

Alyssa Kovalski '24
Earth and Environmental Sciences;
Climate Studies

Sclerochronology of Late Cretaceous Bivalves and Implications for Climate Studies

Mentor: Professor Neil Kelley, Earth and Environmental Sciences

Posterboard No.
57

Gideon Kpurubu '24
Molecular and Cellular Biology

Diversity of reproductive morphology across all Saccharomycotina yeasts

Mentor: Professor Antonis Rokas, Biological Sciences

Posterboard No.
58

Presentations – Group B

Swarat Kulkarni '26
Neuroscience

 **Glycosphingolipids linked to elevated neurotransmission and neurodegeneration in a *Drosophila* model of Niemann Pick Type C**

Mentor: Professor Kendal Broadie, Biological Sciences

Posterboard No.
59

Tammy Le '26
Molecular and Cellular Biology

 **Unraveling the role of ZigA: the first putatively observed zinc metallochaperone in *Staphylococcus aureus* and its biophysical characterization**

Mentor: Professor Walter Chazin, Biochemistry

Posterboard No.
92

Samuel Lee Sangmyung '25
Neuroscience

 **Evaluation of the Urinary MyProstateScore 2.0 plus (MPS2+) Test for Clinically-Significant Prostate Cancer in Patients with Multiparametric MRI**

Mentor: Dr. Jeffrey Tosoian, Urology

Posterboard No.
60

Zhijian Li '25
Computer Science; Mathematics

Hard Negative Dataset Generation Using ChatGPT

Mentor: Professor Kevin Leach, Computer Science

Posterboard No.
93

John Paul Libanati '24
Biomedical Engineering

 **Optimization of Electrospayed, Core-Shell Nanoparticles for Sustained Delivery of Anti-Cancer Immunotherapies**

Mentor: Professor Todd Giorgio, Biomedical Engineering

Posterboard No.
25

David Limpus '24
Electrical and Computer Engineering

Non-Invasive Glucose Detection using Optical Polarimetry

Mentor: Professor Justin Baba, Biomedical Engineering

Posterboard No.
94

Alexander Lin '26
Computer Science

 **Modeling Signaling Pathways Using Recurrent Neural Networks**

Mentor: Professor Gregor Neuert, Molecular Physiology and Biophysics

Posterboard No.
95

Zhangsen Ling '24
Molecular and Cellular Biology

 **Uncovering the function of mitochondrial fission in neurogenesis using stem cell models**

Mentor: Professor Vivian Gama, Cell and Developmental Biology

Posterboard No.
96

Parwan Ahmed Machingal '25
Medicine, Health and Society;
Molecular and Cellular Biology

 **Creating and Expressing a Degradable BVES Construct**

Mentor: Dr. Christopher Williams, Medicine

Posterboard No.
168

Seth Marx '24
Neuroscience; Computer Science

Guiding visual attention in complex and changing environments

Mentor: Professor Geoff Woodman, Psychology

Posterboard No.
97

<p>Sophie Minick '25 Cognitive Studies; Medicine, Health and Society</p>	<p>An Overview of Systematic Reviews Examining the Quantitative Sensory Testing-Derived Hypoalgesic Effects of Manual Therapy for Musculoskeletal Pain <i>Mentor: Professor Rogelio Coronado, Orthopedic Surgery</i></p>	<p>Posterboard No. 121</p>
<p>Ria Mirchandani '26 Computer Science</p>	<p>Lymphocyte Inhibition by Cell Wall Components of <i>Batrachochytrium dendrobatidis</i> (Bd) <i>Mentor: Professor Louise Rollins-Smith, Pathology, Microbiology, and Immunology</i></p>	<p>Posterboard No. 98</p>
<p>Arielle Moussougan '25 Medicine, Health and Society</p>	<p>Investigating Mental Health Among Black Sexual and Gender Minority Adolescents: An Intersectional, Quantitative Approach <i>Mentor: Professor Kirsty Clark, Medicine, Health and Society</i></p>	<p>Posterboard No. 99</p>
<p>Sophia Mueller '24 Psychology; Child Development</p>	<p>Job characteristics and their associations with mental health in autistic adults <i>Mentor: Professor Julie Lounds Taylor, Pediatrics</i></p>	<p>Posterboard No. 30</p>
<p>Aidan Mulvey '25 Neuroscience</p>	<p>Quantification of Inhibitory Interneurons and Pyramidal Neurons in Macaque Cortex and Implications for Hierarchical Information Processing <i>Mentor: Professor André Bastos, Psychology</i></p>	<p>Posterboard No. 100</p>
<p>Amelia Murray '25 Child Development; Cognitive Studies</p>	<p>Fostering Students' Development Through Summer Literacy Programming <i>Mentor: Professor Joanna Christodoulou, Communication Science and Disorders</i></p>	<p>Posterboard No. 122</p>
<p>Suhaah Nadir '25 Neuroscience; Medicine, Health and Society</p>	<p>Memory Recollection of Injury Event is More Detailed than Other Life Events in Individuals with Moderate-Severe Traumatic Brain Injury <i>Mentor: Professor Melissa Duff, Hearing and Speech Sciences</i></p>	<p>Posterboard No. 101</p>
<p>Shadhvika Nandhakumar '24 Medicine, Health and Society; Neuroscience</p>	<p>Earthworms: The Possibility of a Circadian Rhythm <i>Mentor: Professor Carl Johnson, Biological Sciences</i></p>	<p>Posterboard No. 102</p>
<p>Lipika Narisetti '24 Neuroscience; Medicine, Health and Society</p>	<p>Evaluating Tissue Microstructure & Function with MRI of the Lumbar Spinal Cord in Multiple Sclerosis <i>Mentor: Professor Kristin O'Grady, Biomedical Engineering</i></p>	<p>Posterboard No. 103</p>
<p>Demos Negash '25 Mathematics; Physics</p>	<p>Twist Defects in Compound Semiconductors <i>Mentor: Professor Sokrates Pantelides, Physics and Astronomy</i></p>	<p>Posterboard No. 104</p>
<p>Sriya Nemani '24 Anthropology; Molecular and Cellular Biology</p>	<p>Polyethylene-Glycol Assisted Nerve Coaptation Accelerates Sensory Recovery after Traumatic Hand Injury <i>Mentor: Dr. Wesley Thayer, Plastic Surgery</i></p>	<p>Posterboard No. 27</p>

Presentations – Group B

Andy Niser '25 Human and Organizational Development; Computer Science	 MoSafely Stakeholder Interview Project <i>Mentor: Professor Pamela Wisniewski, Computer Science</i>	Posterboard No. 105
Oghosa Omobude '24 Molecular and Cellular Biology; English	 Discovering Antibiotics in Vanderbilt's Soil Microbiome <i>Mentor: Professor Allison Walker, Chemistry, Biological Sciences</i>	Posterboard No. 106
Abigail Parker '24 Ecology, Evolution and Organismal Biology; Medicine, Health and Society	 The Phenome Expansion of SEC23A in Zebrafish Models <i>Mentor: Professor Ela Knapik, Cell and Developmental Biology</i>	Posterboard No. 29
Keval Patel '25 Neuroscience; Medicine, Health and Society	 Elucidating Distribution of Islet-Enriched Transcription Factor NKX2.2 in Human Pancreas across the Lifespan <i>Mentor: Dr. Adel Eskaros, Diabetes, Endocrinology, and Metabolism, Department of Medicine</i>	Posterboard No. 169
Grayson Pitt '25 American Studies	 From Here Through There: Black Migration in the Atlantic World <i>Mentor: Professor Danyelle Valentine, Gender and Sexuality Studies</i>	Posterboard No. 170
Emily Plump '24 Neuroscience	 Neuroscience Research for Autism <i>Mentor: Professor Carissa Cascio, Psychiatry and Behavioral Sciences</i>	Posterboard No. 28
Sophia Podolsky '24 Psychology; Cinema and Media Arts	 Parent Active Mediation while Co-Viewing Gender- Flexible Characters on Children's TV <i>Mentor: Professor Georgene Troseth, Psychology and Human Development</i>	Posterboard No. 123
Jayce Pollard '25 Public Policy Studies; Economics	Making the House a Home: The Impact of Local Roots on Lawmaking Effectiveness <i>Mentor: Professor Alan Wiseman, Political Science</i>	Posterboard No. 108
Lillian Powers '26 Molecular and Cellular Biology, Classical and Mediterranean Studies	 Identifying histone degradation pathway in Drosophila <i>Mentor: Professor Jared Nordman, Biological Sciences</i>	Posterboard No. 166
Karen Pu '24 Computer Science	Antigenic drift simulations and escape mutation predictions with ACORD <i>Mentor: Professor Jens Meiler, Chemistry</i>	Posterboard No. 124
Emily Qian '25 Molecular and Cellular Biology; Environmental Sociology	Characterization of immune cell populations and kinase activation in cell-free hemoglobin exposed lungs <i>Mentor: Dr. Ciara Shaver, Allergy, Pulmonary and Critical Care Medicine</i>	Posterboard No. 109

<p>Yizhen Quan '24 Neuroscience; Medicine, Health and Society</p>	<p>Differences in Ethanol Drinking Microstructure in Male and Female Mice <i>Mentor: Professor Danny Winder, Molecular Physiology and Biophysics</i></p>	<p>Posterboard No. 110</p>
<p>Cheryl Quartey '25 Molecular and Cellular Biology; Communication of Science and Technology</p>	<p>Organizing a 3D brain model: engineering cell signaling centers in human brain organoids using synthetic cell circuits <i>Mentor: Professor Jonathan Brunger, Biomedical Engineering</i></p>	<p>Posterboard No. 125</p>
<p>Neelesh Raj '25 Chemical Engineering</p>	<p>Analyzing effects of Radiation and Diet on expression of ECM components <i>Mentor: Professor Marjan Rafat, Chemical Engineering</i></p>	<p>Posterboard No. 126</p>
<p>Jackson Randal '24 Biochemistry and Chemical Biology</p>	<p> Uncovering MAGE B2 function using unbiased proteomics and interactome analysis <i>Mentor: Professor Hemant Badgandi, Biochemistry and Chemical Biology</i></p>	<p>Posterboard No. 78</p>
<p>Carolina Rocha Lima '25 Earth and Environmental Sciences; Climate Studies</p>	<p>Reconstruction of Southern Caribbean Climate Variability using Stalagmites from Curaçao <i>Mentor: Professor Jessica Oster, Earth and Environmental Sciences</i></p>	<p>Posterboard No. 111</p>
<p>Nikita Rohila '25 Psychology; Medicine, Health and Society</p>	<p> A Linguistic Analysis of Psychosocial Factors in Sexual and Gender Minority Youth's Positive and Negative Daily Experiences: A Daily Diary Study <i>Mentor: Professor Kirsty Clark, Medicine, Health and Society</i></p>	<p>Posterboard No. 112</p>
<p>Simon Rosenbaum '26 American Studies; History</p>	<p>Analyzing the Beale Ciphers Through Historical Land Grants: A new history of buried treasure <i>Mentor: Professor Jacob Sauer, Anthropology</i></p>	<p>Posterboard No. 128</p>
<p>Schyler Rowland '24 Biomedical Engineering</p>	<p>Fabrication and Characterization of a Shear Resistant Cancer Cell Line <i>Mentor: Professor Mike King, Biomedical Engineering</i></p>	<p>Posterboard No. 113</p>
<p>Serat Saad '25 Physics</p>	<p> Identification of young stars in optical SDSS spectra and their properties <i>Mentor: Professor Keivan Stassun, Physics and Astronomy</i></p>	<p>Posterboard No. 129</p>
<p>Saksham Saksena '25 Molecular and Cellular Biology; Medicine, Health and Society</p>	<p>Investigating the Histone Binding Potential of the ZZ and SANT Domains of Ada2 <i>Mentor: Professor Brian Strahl, Biochemistry and Biophysics</i></p>	<p>Posterboard No. 130</p>
<p>Lexi Scheuing '25 Neuroscience</p>	<p> Creating an in-vitro model of group 4 medulloblastoma <i>Mentor: Professor Lena Kutscher, Developmental Origins of Pediatric Cancer</i></p>	<p>Posterboard No. 114</p>

Presentations – Group B

Nick Schulze '24 Neuroscience; Medicine, Health and Society	Activation of Synthetic Notch Receptors with Native Dimeric and Trimeric Ligands <i>Mentor: Professor Jonathan Brunger, Biomedical Engineering</i>	Posterboard No. 115
Eric Sha '24 Biochemistry	 Exploring the Senotherapeutic Potential of Quercetin and Fisetin <i>Mentor: Professor Christopher Wiley, Genetics, Molecular and Cellular Biology</i>	Posterboard No. 132
Yumeng Shen '24 Child Development; Cognitive Studies	 "Middle-ground Parenting:" A Mixed-methods, Multiple-Case Study of Chinese Families with College Students in the U.S. <i>Mentor: Professor Jessika Boles, Psychology and Human Development</i>	Posterboard No. 116
Matt Sigel '24 Medicine, Health and Society	 Hypertrophic Scars: the Extracellular Matrix Components Systematic Review <i>Mentor: Dr. Elizabeth Slater, Plastic Surgery</i>	Posterboard No. 117
Sebastian Stull '25 Computer Science; Applied Mathematics	 EnzyHTP-GPT: A Web App for High-throughput Enzyme Modeling using Natural Language Input <i>Mentor: Professor John Yang, Chemistry</i>	Posterboard No. 119
Bitva Tavafoghi '24 Medicine, Health and Society	 A new set of mutations in the core fission yeast spindle pole body protein Ppc89 leads to self-association and cell signaling defects <i>Mentor: Professor Kathleen Gould, Cell and Developmental Biology</i>	Posterboard No. 120
William Tyukayev '24 Molecular and Cellular Biology	Bacterial Endotoxins in Ex Vivo Perfusion Apparatuses and the Effects of LPS on Isolated Tissues <i>Mentor: Professor Megan Behringer, Biological Sciences</i>	Posterboard No. 37
Kyle Vallone '25 Molecular and Cellular Biology; Communication of Science and Technology	 Characterizing Senescent Cell Dynamics in Zebrafish Retina Regeneration <i>Mentor: Professor James Patton, Biological Sciences</i>	Posterboard No. 38
Alex Vardy '24 Neuroscience	 MC3R Expression in the Paraventricular nucleus of the Thalamus - Nucleus Accumbens pathway <i>Mentor: Professor Richard Simerly, Molecular Physiology and Biophysics</i>	Posterboard No. 39
Ziqi Wang '25 Cognitive Studies; Medicine, Health and Society	 Reasons for Sharing: An Automated Approach to Analyzing Explanations for News Belief <i>Mentor: Professor Lisa Fazio, Psychology and Human Development</i>	Posterboard No. 164
Rui Wang '24 Electrical and Computer Engineering; Computer Science; Mathematics	 Deep learning based methods for underwater ultrasound images denoising and 3D surface reconstruction <i>Mentor: Professor Jack Noble, Electrical and Computer Engineering</i>	Posterboard No. 40

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Vanessa Weis '25
Cognitive Studies; Child
Development

A Pilot Study on the Effectiveness of a Brief Intervention Promoting Positive Emotions to Prevent Depressive and Social Anxiety Symptoms in College Students

Posterboard No.
19

Mentor: Professor Autumn Kujawa, Psychology and Human Development

David Zhang '27
Biological Sciences

The involvement of miR-21 in the molecular pathogenesis of Richter transformation

Posterboard No.
41

Mentor: Professor George Calin, Translational Molecular Pathology

Frank Zhou '25
Neuroscience; Art

Improved Glucose Tolerance in Mice With a Pancreatic β -cell Knock-out of Ascl1

Posterboard No.
168

Mentor: Dr. Mark Magnuson, Molecular Physiology and Biophysics

Maggie (Yang) Zhou '24
Molecular and Cellular Biology;
Medicine, Health and Society

Investigation of the direct role of CD40 overexpression and the molecular mechanism of RAS/PI3K/RAF inhibition in melanoma cancer

Posterboard No.
42

Mentor: Professor Ann Richmond, Pharmacology

Jessie Zimmermann '25
Violin Performance; Neuroscience

Development of Neuronal Projections and Conveyance of Dehydration Signals in the Hypothalamus

Posterboard No.
43

Mentor: Professor Richard Simerly, Molecular Physiology and Biophysics

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