

SUMMER UNDERGRADUATE RESEARCH SYMPOSIUM



Wednesday July 31, 2024

Emory Performing Arts Studio

9:00 AM - 10:00 AM

A celebration of creativity and performance.

Emory Student Center

10:30 AM - 3:00 PM

Learn from our community of student researchers
through oral and poster presentations



EMORY

Undergraduate
Research Programs
Pathways Center



SCHEDULE OF EVENTS

JULY • 31 • 2024

EMORY PERFORMING ARTS STUDIO

BREAKFAST 9:00 AM - 9:30 AM

PIANO PERFORMANCES 9:30 AM - 10:10 AM

EMORY STUDENT CENTER

ORAL SESSION 1
MULTIPURPOSE ROOM 1 10:30 AM - 12:00 PM

POSTER SESSION 1
MULTIPURPOSE ROOMS 4-6

ORAL SESSION 2 12:00 PM - 2:00 PM
MULTIPURPOSE ROOM 1
EMORY STUDENT CENTER

POSTER SESSION 2 1:00 PM - 2:00 PM
MULTIPURPOSE ROOMS 4-6
EMORY STUDENT CENTER

ORAL SESSION 3
MULTIPURPOSE ROOM 1
EMORY STUDENT CENTER 2:00 PM - 3:00 PM

POSTER SESSION 3
MULTIPURPOSE ROOMS 4-6
EMORY STUDENT CENTER

SPECIAL STUDENT TOAST 3:00 PM - 3:15 PM
MULTIPURPOSE ROOM 2



PERFORMANCES

First Name	Last Name	Time
Satvik	Elayavalli	9:30AM-10:00AM
Peiming	Yang	9:30AM-10:00AM

ORAL PRESENTATIONS

First Name	Last Name	Presentation Title	Session #	Time
Ella	Akridge	How Early Stress Becomes Embedded in Adolescents: Stress Sensitivity, Perceived Control, and Self-Compassion	1	11:00AM-11:15AM
Juan	Martinez	Involvement of the CBS-CD73 axis in head and neck malignancies	1	11:15AM-11:30AM
Alejandra	Gamez		1	11:30AM-11:45AM
Max	Coplin	Rational Hippocratic Magic: Is there a place for magic in the healing traditions of Classical and Hellenistic Greece?	1	11:45AM-12:00PM
Toluwanimi	Olaleye	Gun Violence as a Public Health Crisis: Exploring its Impact on the Mental Health of Children and Adolescents	2	12:00PM-12:15PM
Danielle	Sherman		2	12:15PM-12:30PM
Agus	Zelikson		2	12:30PM-12:45PM
Isabel	Brandt	So, You Want to Smuggle Art: US-Mexican Policy Regarding Pre-Hispanic Artifacts	2	12:45PM-1:00PM
Nyasha	Musoni	Development of Enantioselective Hantzsch Ester Synthesis for Drug Repurposing Applications	2	1:00PM-1:15PM
Ryan	Wang	Unsettled Grounds: RLUIPA's Impact on Protecting Muslim Cemeteries	2	1:15PM-1:30PM
Makiah	McLeod	Womb Wisdom: The Root of Reproductive Healing in African Religions	2	1:30PM-1:45PM

ORAL PRESENTATIONS

First Name	Last Name	Presentation Title	Session #	Time
Liane	Muir	Establishing a stereology-based protocol for obtaining accurate estimates of spinal motoneuron cell counts in an ASD mouse model	2	1:45PM-2:00PM
Miguel	Chavez Nava Jr.	Building A Video Game as a Transformative Work of Scholarship	3	2:00PM-2:15PM
Grace	Cayless	Cumulative Early-Life Adversity in Chimpanzees: Insights into Human Resilience	3	2:15PM-2:30PM
Emma	Lee		3	2:30PM-2:45PM
Mohan	Wang	Dirty Joking: An Investigation of the Linkage between Gender, Sexual Jokes, and Status of the Joke Teller	3	2:45PM-3:00PM

POSTER PRESENTATIONS

SESSION 1 - 10:30 AM - 12:00 PM

First Name	Last Name	Presentation Title	Poster Number
Jose	Acevedo	Long-term Effects of Early Life Adversity on Adult Brain Dopamine and Serotonin Receptor Systems Involved in Cocaine Reinforcement	1
Lidia	Appell	Characterizing long term effects of doxorubicin injury on intestinal organoids	2
Justin	Bagger	An exploration into differences in the tumor immune microenvironment in response to immune checkpoint inhibitor therapy supplemented with metformin treatment between HPV+ and HPV- head and neck squamous cell carcinoma	3
Sophia	Barthel	Designing a Workflow for the Expression and Optimization of Vanadium Haloperoxidase Enzymes	4
Anna	Blomerth	Characterizing the impact of IL-17 on macrophage lipid metabolism during Mycobacterium tuberculosis infection.	5
MJ	Brown	How to Take Up Space: Queerness, Phenomenology, and the Internet Play	6
Melanie	Castro-Coronado	Las Voces: Understanding breast and cervical cancer screening patterns among working-class Latina farmworkers in rural Pierson Florida	7
Nkemka	Chukwumerije	Assessing Vascular Health in Women with HIV: A Feasibility Framework for EndoPAT 2000®	8

POSTER PRESENTATIONS

SESSION 1 - 10:30 AM - 12:00 PM

First Name	Last Name	Presentation Title	Poster Number
Jamie	Cohen	Vasoactive Intestinal Peptide Receptor antagonists ANT308 & VIP antibodies potentiate isolated human T cells in vitro	9
Pahul	Dhoat	The Power of Negativity: How Depression Affects Our Image	10
Claire	Garvin	Modeling the Social Problem: The emergence of worker/parasite dynamics	11
Myles	Gosha	Investigating the Bioactivity of Secondary Metabolites from Cyphomyrmex Cultivar	12
Justin	Guo	Reduced AD aggregation and novel tauopathies resulting from different hTau24 variants.	13
Cierra	Hickson		14
Lucas (Ziqing)	Huang		15
Sydney	Hur		16
Hanti	Jiang	Investigating the expression and function of Neuromedin U in zebrafish enteric nervous system using CRISPR genome editing	17
Logan	Jones		18
Sreyas	Kanaparti	Identifying novel immunotherapeutic targets by proteomic profiling of exhausted T cells	19
Abbas	Khambatti	Investigation into the structure and function of urease subunits from Klebsiella aerogenes	20

POSTER PRESENTATIONS

SESSION 1 - 10:30 AM - 12:00 PM

First Name	Last Name	Presentation Title	Poster Number
Nava	Klopper	From the Sex Wars to #MeToo: Sex Positivity and the Mediation of Sexual Harm and Risk	21
Ansley	Langham	Digital Information Fiduciaries and Sen's Paretian Liberal	22
Abby	Larson	Comparing the Reaction Times in Rhesus macaque Monkeys and Humans When Learning Simple and Complex Grammars	23
Taylor	Leonard	Rates of Hypoxia and Anaphylaxis by Chemotherapy Course in Children with Acute Lymphoblastic Leukemia	24
Noah	Lian	On the evolution of the stage through the lens of stage direction	25
Emi	Lundberg	Cas12a Amplification Based Origami Protein Detector	26
Andrew	Marini	Potential Role of Endothelium Dysfunction in Jugular Venous Thrombosis due to Abnormal Jugular Venous Flow Patterns During Spaceflight	27
Amirah	Mckinley	Visual Imagery in Retrieval Practice	28
Aria	Miller	The Development of Oxygen Induced Retinopathy of Prematurity and The Therapeutic Effects of Blue Light Exposure	29

POSTER PRESENTATIONS

SESSION 1 - 10:30 AM - 12:00 PM

First Name	Last Name	Presentation Title	Poster Number
Sanjeev	Mutharaman	Animal Host Mediates Transmission of Symbiont Through	30
Anushka	Nayak	Post-transcriptional Regulation of the C. albicans Morphological Transition by the Ime4 Methyltransferase Complex	31
Zuri	Omari-Muhammad	Characterizing Proliferative Heterogeneity in the Developing Epidermis	32
Bella	Parker	Investigating the Effect of Antibiotics on E. coli K-12 Outer Membrane Permeability in Response to O Antigen Re-Introduction	33
Daelyn	Pena	Targeting Fungal Protein Synthesis to Combat Fungal Infection	34
Taylor	Richardson	Analysis of Risk Criteria for Human Immunodeficiency Virus, Hepatitis B Virus, and Hepatitis C Virus Infection among Deceased Organ Donors in the United States	35
Angel	Santos	Assessment of Heartland Virus in tick populations in Georgia	36
Natasha	Silva	Uncovering the Role of IPO9 in Hedgehog Signaling	37
Ben	Spiegel	Researching Voter Turnout Among Black Voters	38

POSTER PRESENTATIONS

SESSION 1 - 10:30 AM - 12:00 PM

First Name	Last Name	Presentation Title	Poster Number
Siddarth	Suresh	Cellular Proliferation and Signaling in Suppressed Polycystic Kidney Disease Mouse Models	39
Madison	Tiaffay	Education Policy in Georgia and The Impacts of Far-Right Encroachment on Public Schooling	40
Ayantü	Uli	Shearing of Polydisperse Granular Material	41
Aanya	Vusirikala	“Chirp or Tweet”: Using Neural Patterns for Classifying Juvenile Bengalese Finch Syllables	42
Sophia	Whitmire	Redefining Third Spaces in the Digital Age: Exploring the Potential of Virtual Reality to Facilitate Sustainable Social Connection	43
Yifei	Wu	Transgenically-Expressed Chromatin-Binding Probe as Histone Acetylation Sensor in Lipogenic Triple-Negative Breast Cancer Cells	44
Eric	Yao		45
Abigail	Young	Investigating the structure activity-relationship of linker lengths on diphenylphosphonium disinfectant scaffolds	46
Erin	Zhou	Designing a Molecular Compressive Force Sensor to Measure T-Cell-Antigen Interactions	47

POSTER PRESENTATIONS

SESSION 2 - 1:00 PM - 2:00 PM

First Name	Last Name	Presentation Title	Poster Number
Yasmine	Ackall	Investigating peptide inhibition of the Nuclear Egress Complex in Herpes Simplex Virus-1 through BLI-based screening	1
Brandon	Artis	Identification of antigen-specific T cell responses to vaccines administered during early childhood	2
Abigail	Balson	Music Education & Community: How Band and Choir Programs in Texas High Schools Foster Community	3
Alberto	Bonilla	A Story to Tell: Navigating a Hispanic Florida Farmworker's Healthcare Experience	4
Julia	Bracci	Effect of Baricitinib on the HIV-1 Reservoir In Vitro	5
Brandon	Brewer	Identification of Gene Regulators of Germline Development in C. Elegans	6
Sophia	Browning	Faith-Based Sexual and Reproductive Health Programming: A Literature Review	7
Angela	Chen		8
Jingyue	Chen	Investigation the Role of RNA in Chromatin Structure	9
Andrew	Chung	Utilizing Synthetic Presentation Data in RAG Frameworks	10
Brandon	Colella	Investigating Substrate Selectivity in the Glycopeptide Antibiotic Keratinicyclin B and the Nitrating Enzyme RufO	11

POSTER PRESENTATIONS

SESSION 2 - 1:00 PM - 2:00 PM

First Name	Last Name	Presentation Title	Poster Number
Olivia	DeLucia	Synthesis of Catalyst-loaded Belousov-Zhabotinsky Micro-Oscillators using Alginate (F-SA) Polymer	12
Weishan	Deng	How Do Estrogens Rapidly Increase Sociality?	13
Guanwen	Ding	DNA aptamer mediated targeted delivery of cabozantinib using liposomes to inhibit head and neck cancer cell growth	14
Heath	Dunlop	The Impact of Nab2 Knockdown in Various Drosophila Melanogaster Tissues on Lipid Droplet Metabolism	15
Vincent	Flegeance	Using Adeno-associated virus in mice to target the Prox1 regulatory region within the context of epilepsy.	16
Nikhita Sai	Gandhe	Managing COVID-19: Health Aid's Economic Impact & Policy Insights	17
Alixandra	Green	How does the Early Life Social Environment Influence Development of Social Neural Systems?	18
Justin	Hahm		19
Jingzhou	Huang	Redistribution of patients and healthcare provision after hospital Closure: Evidence from rural Georgia hospitals	20
Lisa	Jin		21
Thora	Jordt	Commodifying Revolution: The Mesoamerican Art Market and the Aestheticization of Mexican Politics in the 1940s	22

POSTER PRESENTATIONS

SESSION 2 - 1:00 PM - 2:00 PM

First Name	Last Name	Presentation Title	Poster Number
Ethan	Kim	Man is Machine: Sion Sono's The Whispering Star and our Posthuman Futures	23
Nikola	Kováčová	Total Synthesis of Fendiline Analogs Focused on Improved Permeation and Drug Accumulation in Wild-Type <i>A.baumannii</i>	24
Jose Lorenzo	Layug	Structural Analysis and Engineering of Iron-Sulfur Cluster Containing, C-H Bond Activating Metalloenzymes	25
Christopher	Li	Mutating the KPNA2 Binding Site Inhibits ARID1B-KPNA2-KPNB1 Complex Formation	26
Custer	Liu	Contributions of Somatosensory System Components to Texture Discrimination	27
Bridget	Mackie	Text and Image in Medieval Stained Glass: An Analysis of the Pricke of Conscience Window	28
Samantha	Martin	Political Participation Among Immigrant Generations	29
Zoe	McNeil	Association Between Caffeine Use and Negative Affect: in a Healthy Population of Adolescents and Young Adults	30
Rahima	Mumed	Behavioral Analysis of a Parkinson's Disease Mouse Model: Exploring Bilateral Motor Coordination	31
Megan	Noh	PAK4 gene as therapeutic target for Ewing Sarcoma treatment	32
Amal	Panjwani	Understanding the Secular Role of the Ismaili Imams and their Influence on Ismaili Migration Patterns	33

POSTER PRESENTATIONS

SESSION 2 - 1:00 PM - 2:00 PM

First Name	Last Name	Presentation Title	Poster Number
Jaleciah	Parker	Understanding Drug Resistance in t4:14 Multiple Myeloma	34
Tiago	Pernambuco Toledo de Macêdo	Reconstructing sedimentation trajectories of particles in viscous fluids	35
Kayla	Robinson	The Role of Gut Microbiota from Vasoactive Intestinal Peptide Knock-Out Mice in Conferring Leukemia Resistance to Wild-Type Mice	36
Jacob	Sherber		37
Tushar	Singh	Chronic Alcohol Consumption Causes Degenerative Changes in Spinal Structure	38
Paul	Sprowl	Combating Antibiotic Resistance with <i>Callicarpa americana</i> : A Study on Synergistic Compounds	39
Aislinn	Trejo Romero	In vivo and in vitro analyses demonstrate the presence of nuclear enriched abundant transcript 1 (Neat1) increases Duchenne muscular dystrophy phenotypes in mice.	40
Jana	Vadillo Godoy	Measuring the Role of Different Solvents Evaporating from PMMA Polymer Films	41
Keshyne	Washington	Structural Characterization of THEMIS CABIT1 Domain	42
Sofia	Woodruff	Early learning standards for bilingual children across the U.S.	43

POSTER PRESENTATIONS

SESSION 2 - 1:00 PM - 2:00 PM

First Name	Last Name	Presentation Title	Poster Number
Iris	Xia		45
Samme	Xie	Video-based Quantitative Analysis of Orofacial Movements and Pupil Activity in a Parkinson's Disease Mouse Model	46
Cormack	Ye	Development and Application of AI curricula in Emory University's Goizueta Business School: Strategies for Addressing Labor Market Changes	47
Allen	Zhang	Using Budding Yeast Mutants to Define Cellular Pathways Influenced by Mutant Histones	48

POSTER PRESENTATIONS

SESSION 3 - 2:00 PM - 3:00 PM

First Name	Last Name	Presentation Title	Poster Number
Ella	Anderson	Making the Invisible Visible: Observing Sand Relaxation Through Laser Interferometry	1
Chase	Austin	Unveiling the Pavlovian-Instrumental Effect: How Reward-Seeking Behavior Interrupts Reinforcement Learning	2
Joao	Barichello de Quevedo	Investigating the Effect of Translation Inhibition by Sodium Arsenite Through Puromycin Labeling	3
Mihir	Beheray		4
Alexis	Black	The Interaction of Working Memory and Time Perception in Nonhuman Primates	5
Iris	Borunda	Identifying Suppressors of DNA Damage-Induced Growth Defects in the Oncohistone Mutant H3G34V using Budding Yeast	6
Tim	Brewer	Noise Pollution Disparities in Education: Environmental Justice in Atlanta, GA	7
Sherry	Cai	The Impact of Inflation Environment and Government Policies on Exchange Rate Pass-Through in China's Coastal Regions	8
Beral	Chen	Psilocybin Use in Naturalistic Settings	9
Jonathan	Choi		10
Ajani	Claxton-Warner		11

POSTER PRESENTATIONS

SESSION 3 - 2:00 PM - 3:00 PM

First Name	Last Name	Presentation Title	Poster Number
Isabella	Colindres	Deciphering the Interactions of Macrophages and Fibro/Adipogenic Progenitors in Fibrodysplasia ossificans progressiva: Insights into Heterotopic Ossification and Cytokine Inflammation	12
Jordan	Derry	Mechanisms Underlying Stress and Emotions (MUSE) in African American Women's Health Study: The Impact of Superwoman Schema on Central Hemodynamics in Black Woman	13
Yufei (Delia)	Du	TFRC as a mediator of gene-environment interactions in the schizophrenia-associated 3q29 deletion	14
Taiann	Fowlkes	Determining non-B-form DNA signals at centromeres using two independent genome-wide profiling methods	15
Brianna	Goodloe	Liver explant cultures to model biliary proliferation and maturation in vitro	16
Chloe	Guerrero	Functional Assessment of Synthetic Xist lncRNA Constructs for Epigenetic Silencing	17
Anya	Hung	SYNCRIP Isoforms in Neural Stimulus-Response	18
Sumi	Jung	Beyond Borders and Boundaries: Exploring the Relationship Between National Origin, Gender, and Career Aspiration	19

POSTER PRESENTATIONS

SESSION 3 - 2:00 PM - 3:00 PM

First Name	Last Name	Presentation Title	Poster Number
Iman	Kazani	Purification of MBP RIG-I Cards	20
Nadifo	Kelley	Developing an IL-37 secreting Chimeric Antigen Receptor (CAR) T cell	21
Etana	King	Identifying Stereotyped Behaviors in Freely Behaving Mice	22
Sangyoon	Lee		24
Gabriella	Lee	Investigating the Association of State and Trait Emotionality and Compulsive Alcohol Use	23
Xinyang	Li		26
Leo	Li	Identifying combination strategies in Renal Medullary Carcinomas	25
Jordan	Lockwood	Childhood trauma's association with Alcohol Use Disorder	27
Taina	Marcelin	Exploring the Nucleic Acid Interactions of LysRS and its Binding Affinity	28
Alex	Martinez	Voices of Emory: The Linguistic Diversity of Emory Undergraduates	29
Kailash	Menon	Streamlined Validation of Novel Immunomodulators for Treatment or Reversal of HIV Associated Neuroretinal Disorders	30
Naomi	Mwangi	The Relationship Between Economic Privilege, Diversity and Children's Internalizing Behaviors	31

POSTER PRESENTATIONS

SESSION 3 - 2:00 PM - 3:00 PM

First Name	Last Name	Presentation Title	Poster Number
MaKayla	Ojeah	Tackling the Task Impurity Problem: Identifying the Best Measures of Inhibitory Control	32
Isaiah	Paris	Introduction to Green Chemistry: Bioreduction of (R)-carvone and chalcones catalyzed by Baker's Yeast (BY) in aqueous mono- and biphasic systems for Oxford's CHEM203L	33
Xander	Patton	Inhibition of Cellular Contractility Synergistically Improves TGF- β 3-mediated Chondrogenesis	34
Maya	Rezak	Top-of-the-Ticket to the Bottom of the Ballot: Non-Judicial Campaign Impacts on State Supreme Court Elections	35
Madeleine	Sanders	The impact of circadian rhythm on innate immunity	36
Elizabeth	Shin	Gender differences in genetic and environmental influences on children's externalizing behavior	37
Angel	Sosa	The Silent Electorate: Why Latinxs Are Not Turning Out to Vote	38
Janet	Thampy	Addressing Racial Disparities within the US Criminal Justice System through Community-Based Prison Abolition and Restorative Justice Practices in Angela Davis' Framework	39
Bao	Truong	The relationship between educational spending and economic growth in different income groups	40

POSTER PRESENTATIONS

SESSION 3 - 2:00 PM - 3:00 PM

First Name	Last Name	Presentation Title	Poster Number
Alex	Vigder	Paying Attention: An Art Lesson on Indigenous American World-views	41
Chloe	Wells	Deciphering the regulation of germline stem cell maintenance and niche formation by two transcriptional coactivators	42
Markelle	Worrell	Ecological Relationships Between Monarch Butterflies and <i>A. tuberosa</i> and <i>A. linaria</i> : A Comparative Study	43
Andrew	Yang	A Novel Lens on Metacognition in Visual Analytics	44
Ellie	Yang	The Bidirectional Influence of Maternal Depression?on Child Behavior Problems	45
Solan	Yao		46
Joyce	Yeo	Role of PAM DANs in <i>Drosophila</i> Innate and Learned Behaviors	47
Kevin	Zheng	Examining Changes in Oxytocin and Testosterone During the Transition to Fatherhood	48