



GEORGIA STATE UNIVERSITY

GSURC

UNDERGRADUATE RESEARCH CONFERENCE



April 11, 2023
Student Center East

GEORGIA STATE UNIVERSITY



UNDERGRADUATE RESEARCH CONFERENCE

Tuesday, April 11, 2023

8:00 a.m. - 9:00 a.m.	Morning Presenter Check-In	Student Center East Lobby
9:00 a.m. - 9:30 a.m.	Opening Remarks: President Blake	Student Center Ballroom
9:30 a.m. - 10:45 a.m.	Poster Session I & Artistic Displays	Student Center Ballroom
10:45 a.m. - 11:00 a.m.	Break	
11:00 a.m. - 12:00 p.m.	Oral Presentations I	Student Center East 2 nd Floor Suites
12:00 p.m. - 1:00 p.m.	Afternoon Presenter Check-In	Student Center East Lobby
1:00 p.m. - 2:00 p.m.	Oral Presentations II & Film Presentations	Student Center East 2 nd Floor Suites & Speaker's Auditorium
2:00 p.m. - 2:15 p.m.	Break	
2:15 p.m. - 3:30 p.m.	Poster Session II & Artistic Displays	Student Center Ballroom
3:40 p.m. - 5:00 p.m.	Keynote Address: Dr. Tim Denning Awards Ceremony Dessert Reception	Student Center Ballroom



Artistic Displays

9:30 a.m. - 10:45 a.m.



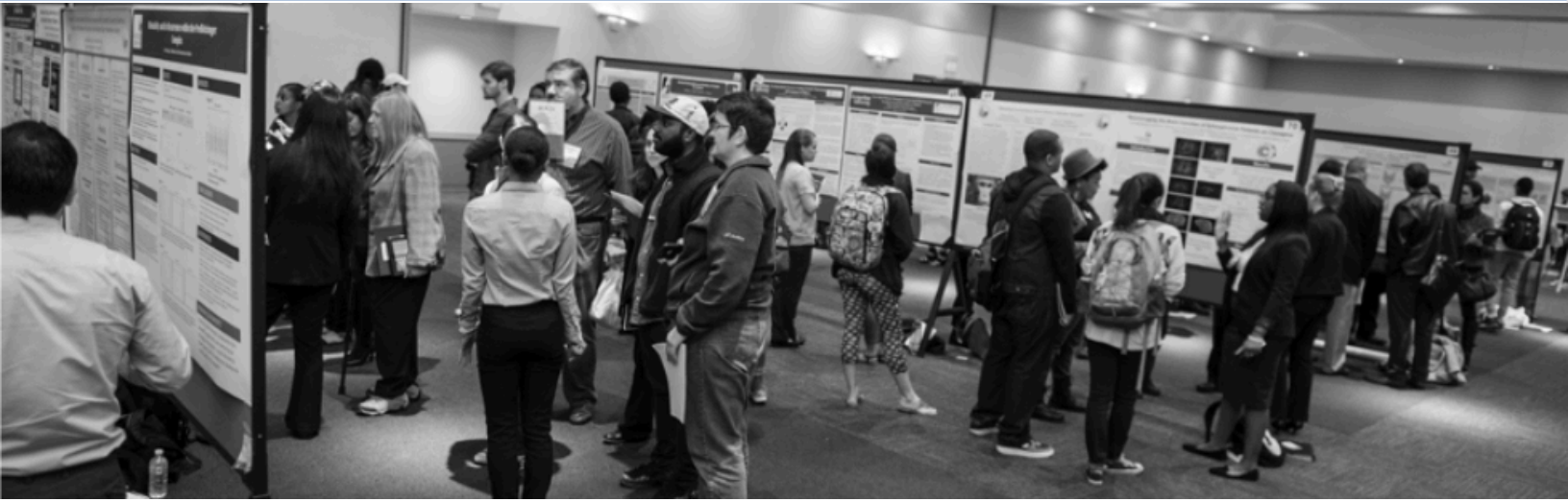
STUDENT CENTER EAST BALLROOM

- | | | | |
|---|--|---|--|
| 1 | Cultural Façade
Diane Cam Riffel
Faculty Sponsor: Darien Arikoski-Johnson | 5 | Reclamation #4
James Andrew Delevett
Faculty Sponsor: Dr. Darien Arikoski-Johnson |
| 2 | Divergent
Erin Rowland
Faculty Sponsor: Dr. Serena Perrone | 6 | Tumbling Blocks
Madeline Bass
Faculty Sponsor: Dr. Jess Jones |
| 3 | HexiQuilt and HexiCrawl
Rachel Vice
Faculty Sponsor: Jess Jones | 7 | Joey's Scavenger Hunt for God
Jada Young
Faculty Sponsor: Dr. Ashlyn Strozier |
| 4 | Isolation, Rebirth, Forward
Horacio Arias-Rodriguez
Faculty Sponsor: Dr. Jill Frank | | |



Poster Presentations I

9:30 a.m. - 10:45 a.m.



STUDENT CENTER EAST BALLROOM

1 Reversing the Pipeline: How Prison Education Programs Can Transpose the Outcomes of the School-to-Prison Pipeline

Madelief Tilder

Faculty Sponsor: Dr. Owen Cantrell

2 Analysis of Higher Education in Philips Prison Campus hosted by Georgia State University Prison Education Program and Common Good Atlanta

Catherine West, Charde Franklin, Shane Erich, Andrew Foster, Christian Villanueva, DeAndre Kinsey

Faculty Sponsor: Dr. Elizabeth Beck

3 Rehumanization Through Education: Roma Revived

Sabrina Thomas

Faculty Sponsor: Dr. Ashlyn Strozier

4 The Role of Stimulus Fluency in Prospective and Retrospective Metacognitive Judgments by Rhesus Monkeys (*Macaca mulatta*) and Capuchin Monkeys (*Cebus apella*)

Kathleen Friedlein

Faculty Sponsor: Dr. Michael Beran

5 Visual and Auditory Perceptual Learning in Children with High-Functioning Autism Spectrum Disorder

Liliana Ramos, Rafaella Lopes, Brooke N. Jackson, Barbara Church, J. David Smith

Faculty Sponsor: Dr. J. David Smith

6 The Impact of Symbolic Representation on Category Learning in Children and Adults

Alecia Ferguson, Mari Sudhakar, Brooke Jackson, Barbara Church, David Smith

Faculty Sponsor: Dr. David Smith

7 Stress and Sequence Preferences: Is Cortisol Related to How Capuchin Monkeys Develop Sequence Order Preferences?

Kaylynn McCarthy, Jhonatan Saldaña Santisteban, Meg Sosnowski, Marcela Benitez, Sarah Brosnan

Faculty Sponsor: Dr. Sarah Brosnan

8 Sleep On It: Examining the Relationship between Sleep Duration and Working Memory

Kylie Szymanski, Naveen Thourani, Mercedes Fyffe, Weston Rowe

Faculty Sponsor: Dr. Tricia King

9 Sitting Still Can Help You Chill: Neurological Responses to Meditation

Arianna Bird, Maria Misiura

Faculty Sponsor: Dr. Maria Misiura

10 Sexual Victimization Survivors Disproportionately Have Friends Who Support Sexual Assault

Abena Fredua-Agyeman, Olivia Westemeier, Kevin Swartout

Faculty Sponsor: Dr. Kevin Swartout

11 Jekyll and Hyde: The Combined Effects of Remorseful and Criminal Facial Features on Recidivism Beliefs

Maha Naseer, Adriana Adler

Faculty Sponsor: Dr. Heather Kleider-Offutt

12 How Lit is your Fitbit? A preliminary analysis from the Healthy Student Brain Study

Mercedes Fyffe, Maria Misiura

Faculty Sponsor: Dr. Maria Misiura

13 How does Need for Cognition Relate to Extremist Views?

Annelise Petritz, Kristy Duncan, Megan Capodanno, Heather Kleider-Offutt

Faculty Sponsor: Dr. Heather Kleider-Offutt

14 Constructive Communication Moderates the Association Between Interpersonal Problems and Relationship Satisfaction

Rorah Ndungu, Julia Hammett, Brennah Ross, Anna Peddle, Cynthia Stappenbeck

Faculty Sponsor: Dr. Cynthia Stappenbeck

15 **Can Atypical Category Learning in Children with High-Functioning Autism Spectrum Disorder Be Improved?**
Annissa Taylor, Brenna Smith, Brooke Jackson, John Smith, Barbara Church
Faculty Sponsor: Dr. John Smith

16 **Brain Games: The Inoculation Effects of Interventions Against Fake News**
Sara Clifton
Faculty Sponsor: Dr. Heather Kleider-Offutt

17 **Household Food Security of Custodial Grandparents: Examination of the Social Determinants of Health & Sleep Quality**
Emerald Gibbs
Faculty Sponsor: Dr. Kellie Mayfield

18 **Importance of ESOL Education**
Jennifer Santos
Faculty Sponsor: Dr. Cassandra White

19 **Raspberries Favorably Mediate Redox Enzymes in the Liver of Angiotensin II-Infused Rats**
Kendahl Heckstall, Rami Najjar, Maureen Meister, Jessica Danh, Desiree Wanders, Rafaela Feresin
Faculty Sponsor: Rafaela Feresin

20 **Protective Effects of Raspberry Consumption on the Lung in Angiotensin II-infused Rats**
Wesley Grace, Rami Najjar, Maureen Meister, Jessica Danh, Desiree Wanders, Rafaela Feresin
Faculty Sponsor: Dr. Rafaela Feresin

21 **Default Mode Connectivity Tracks Alzheimer's Biomarkers in a Racially Diverse Middle-aged Cohort**
Chinkuli Munkombwe, Maria Misiura
Faculty Sponsor: Dr. Maria Misiura

22 **Modulation of TRPM8 Ion Current by Oxaliplatin Causing Hyperactive Cold Nociception: A Model Study**
Cole Cunningham, Brandon Dennis, Shardi Griffin
Faculty Sponsor: Dr. Gennady Cymbalyuk

23 **Effects of Task-3, Volatile Anesthetics, and Temperature on the Firing patterns of a Trpm8 Containing Afferent Neuron**
Nial Beaton, Westley Williams, Natalia Maksymchuk
Faculty Sponsor: Dr. Gennady Cymbalyuk

24 **Early Life Pain Alters Prostaglandin and Microglia Response in Adult Male and Female Rats During an Immune Challenge**
Melani Macik, Morgan Gomez
Faculty Sponsor: Dr. Anne Murphy

25 **Cx3cr1-Cre Expression in Microglia**
Fae Clarke
Faculty Sponsor: Dr. Jessica Bolton

26 **Effects of delta-tocotrienol on insulin signaling and inflammation in Neuro-2A cells**
Eshan Shah, Hannah Lail, Angela Mabb, Huanbiao Mo, Desiree Wanders
Faculty Sponsor: Dr. Desiree Wanders

27 **The Effect of tau Overexpression on Dendritic Spines in Cultured Primary Hippocampal Neurons**
Vishrut Thaker
Faculty Sponsor: Dr. Angela Mabb

28 **The Structure of Semigroups Closed Under Differences**
Dmitry Demin
Faculty Sponsor: Dr. Florian Enescu

29 **Minimum Rank of Trees**
Abby Ramcharan, Ananya Nimbalkar
Faculty Sponsor: Dr. Hendricus van der Holst

30 **Hydrostatic Force: Applications and Implications**
Samuel Smith
Faculty Sponsor: Dr. Somaya Muiny

31 **Prediction for Cervical Cancer from Risk Factors based on Machine Learning**
Yiting Zhang, Patricia Ilic
Faculty Sponsor: Dr. Yichuan Zhao

32 **Solvatochromism Effects on 4-Fluoro Isoxazole Series**
Kristy Tran
Faculty Sponsor: Dr. Thomas Robilotto

- 33 **Development of a Novel Protein Based MRI Contrast Agent, hProCA32.collagen 1**
Tong Wu, Oluwabukola Bamishaye, Francis Akinlotan, Hyein Kang, Anita Dorabadizare, Dongjun Li
Faculty Sponsor: Dr. Jenny Yang
- 34 **Differences in Phototoxicity of Menadione and Plumbagin in the Presence of Reducing Agents Examined via DNA Damage**
Sneha Kannan
Dr. Kathryn Grant
- 35 **Tocotrienol-derived Nanoparticle Alleviate E-cigarettes Induced Inflammation In Vitro**
Thanh Tai Vo, Hannah Lail, Desiree Wanders, Xiangming Ji
Faculty Sponsor: Dr. Xiangming Ji
- 36 **The Effects of Raspberries on Oxidative Stress in the Aorta of Angiotensin II-Infused Rats**
Rafaela Todd, Maureen Meister, Rami Najjar, Jessica Danh, Desiree Wanders PhD, Rafaela Feresin PhD
Faculty Sponsor: Dr. Rafaela Feresin
- 37 **Screening of Antibiotic-producing Soil Bacteria as Part of the Tiny Earth Initiative**
Chinedu Nwosu, Sushaunna Hines
Faculty Sponsor: Dr. Thalita Abrahao
- 38 **Effects of Camphor-5-monooxygenase on the Resistance or Sensitivity of Bacteria to Wormwood**
Kenny Andrews, Nathan J. Beneteau, Jared Fisher
Faculty Sponsor: Dr. Samantha Parks
- 39 **The Effect of 1,8-cineole 2-endo-monooxygenase on Bacteria's Sensitivity and Resistance to *Elettaria cardamomum***
Antoinette Moore, Tonja Johnson
Faculty Sponsor: Dr. Samantha Parks
- 40 **From Morphogens to Monogamy: the Wnt Pathway's Role in Pair Bonding**
Demira Jakupovic
Faculty Sponsor: Dr. Jonathan B. Sylvester
- 41 **Using mCherry-CBM20 Reporter to Study Degradation of Yeast Glycogen Granules**
Praneetha Battu, Nimna Wijewantha, Taras Nazarko
Faculty Sponsor: Dr. Taras Nazarko

42 **The Role of Irx and Alx on Pair Bond Formation in a Monogamous Fish Brain**
Aastha Patel
Faculty Sponsor: Dr. Jonathan Sylvester

43 **The Effect of Nighttime Light on Laboratory Mice Glucocorticoid Production**
Demi West
Faculty Sponsor: Dr. Rachel Santymire

44 **The Evolution of Covid-19 in Georgia**
Yonatan Amsalu
Faculty Sponsor: Dr. Jeffery Mahr

45 **Cellular Assays for Drug Discovery of Calcium-Sensing Receptor Mediated Signaling**
Varun Narra
Faculty Sponsor: Dr. Jenny Yang

46 **"It's Getting Hot in Here": Understanding the Mechanisms of Calcification in *Astrangia poculata* and its Responses to Heat Stress**
Alejandra Tapia Batres
Faculty Sponsor: Dr. Loretta Roberson

47 **[Re]imagining Ourselves in Urban Ecological Systems**
Emma Stacey
Faculty Sponsor: Dr. Shannon Finck

48 **Bias in AI and Machine Learning Models: How It Happens and How To Fix It**
Ruqayyah Muse
Faculty Sponsor: Dr. Murray Patterson



Oral Presentations I

11:00 a.m. - 12:00 p.m.



STUDENT CENTER EAST 200 (Golden Key Board Room)

Dermatomyositis: The Perilous Journey of a Rare Disease

Rashawn Thomas

Faculty Sponsor: Dr. Cynthia Foote

Prevalence of Anxiety and Depression Among College Students Exposed to Adverse Childhood Experiences and their Resilience Practices

Temi Lasile

Faculty Sponsor: Dr. Ciara Smalls Glover

Recycling Perception vs. Pattern: An Anthropological study on Four College Students

Jose Arellano

Faculty Sponsor: Dr. Jennifer Wilson

Recycling Today

Sahar Mirzad

Faculty Sponsor: Dr. Brendan Balint

STUDENT CENTER EAST 203

"What Peace Can We Return": Examining the Hero Archetype in Paradise Lost and His Dark Materials

Ashley Gravlin

Faculty Sponsor: Dr. Stephen Dobranski

With Great Intellectual Property Comes Great Responsibility: The Moral Decay of Spider-Man in the Marvel Cinematic Universe

Gracie Whitney

Faculty Sponsor: Dr. Gina Caison

The Transnational Reach of the Osiris Myth in the Mediterranean (ca. 359 BC – 60 BC): An Early Model of Religious Syncretism

Adayshia Johnson

Faculty Sponsor: Dr. Joanna Jury

STUDENT CENTER EAST 216

Creating a Career Platform to Network GSU Students to STEM careers

Satvik Seeram

Faculty Sponsor: Dr. Paul Ulrich

Microaggressions as Adversarial Attacks: a Machine-Learning Perspective

Varun Joshi, Bee Smalley, Ari Key

Faculty Sponsor: Dr. Murray Patterson

Introduction to Quantum Computing

Abhay Deep Singh

Faculty Sponsor: Dr. Ashwin Ashok

STUDENT CENTER EAST 217

Obesity and Food Access: a Paradox of Choice?

Denise Wong

Faculty Sponsor: Dr. Lorenzo Almada

A Comparative Analysis of Discriminatory Presidential and Public Rhetoric as Methods of Perpetuating Black Inferiority

Lauren Adams

Dr. Lynée Gaillet

Mistakes I've Learned: How to Not be a Bystander

Sarah Post

Faculty Sponsor: Dr. David Cheshier

Star Power: Views on Celebrity Activism

Tori-marie Palmer

Faculty Sponsor: Dr. Lakeyta Bonnette

STUDENT CENTER EAST 218

Lynxish: Constructing a Language

Kayla Burrow, Nicholas Friedman, Ryan Smith

Faculty Sponsor: Dr. Sara Cushing

The Effects of English-Only Movement

Yuriko Dunn

Faculty Sponsor: Dr. Hester Furey

Whose Narrative Is It? The Intrusive Imagination of White Transcribers and Editors in African American Narratives

Andrea Merritt

Faculty Sponsor: Dr. Elizabeth West



Films

1:00 p.m. - 2:00 p.m.



SPEAKER'S AUDITORIUM

- 1 **Arnie and Gretchen**
Jordan Walker
Faculty Sponsor: Dr. Robbie Land

- 2 **"bus."**
Myles Wishart
Faculty Sponsor: Dr. Robbie Land

- 3 **Can do!**
Skyler Hopkins
Faculty Sponsor: Dr. Daniel Robin

- 4 **Friendzone**
Robert Williams
Faculty Sponsor: Dr. Robbie Land



Oral Presentations II

1:00 p.m. - 2:00 p.m.



STUDENT CENTER EAST 200 (Golden Key Board Room)

Measuring the Validity of the Laboratory Perspectives Instrument and Exploring the Laboratory Perspectives of Undergraduate Chemistry Students

Rachael Mayhew

Faculty Sponsor: Dr. Suazette Mooring

Terrestrial Gastropods of Atlanta: Snails and Slugs Across the Old Growth Forest Network

Ashley Edwards, Carly Russo, Elle Shirah, Christy Visaggi

Faculty Sponsor: Dr. Christy Visaggi

Synkhlorum: An Algae-Bacteria Co-Culture for Efficient Biofuel Production

Elizabeth Plumart, Aliyah Bujung, Chloe Benjamin, Xucheng Zhang

Faculty Sponsor: Dr. Jonathan Sylvester

STUDENT CENTER EAST 201

Regional Patterns of Osteophytosis Formation in the Vertebrae of Mature and Elderly Individuals

Mia McMahon

Faculty Sponsor: Dr. Frank Williams

Examining the Impact of Opioid Addiction in Pregnancy on Ultrasonic Vocalization in Rat Pups

Varun Joshi

Faculty Sponsor: Dr. Anne Murphy

Motion Correction or Vindication: Motion-related Signals Contain Meaningful Brain Network Information

Samujjwal Kumar, Kyle Jensen, Armin Iraj, Vince Calhoun

Faculty Sponsor: Dr. Armin Iraj

Tracing Cybercriminals and Their Activity

Aparna Mandapaka

Faculty Sponsor: Dr. Anu Bourgeois

STUDENT CENTER EAST 203

Diffusion and Affiliation: Understanding Swift Creek Settlement Patterns Through Conjointly Applying Technologies to Pottery

Louis Prendergast

Faculty Sponsor: Dr. Jeffrey Glover

Examining the Absence of Albrecht Dürer's Woodcuts in Maximilian I's Theuerdank

Hailey Holtzclaw

Faculty Sponsor: Dr. Susan Richmond

Charlie Parker and Bebop: Deconstructing Genre Boundaries to Elevate Black Music

Michael Carswell

Faculty Sponsor: Dr. Marva Carter

STUDENT CENTER EAST 216

Should Blood Be Thicker Than Water? Examining the Role of Partiality Within the Stoic Cosmopolitan Ideal

Nana Yaa Awere

Faculty Sponsor: Dr. Allison Piñeros Glasscock

Contextualizing Eros: The Affirmation of the Eromenos and The Public Desistance of Lolita Culture

Brooke Pittman

Faculty Sponsor: Dr. Louis Ruprecht

The NRA: Puppet Master of Gun Control

Morgan-Lee Blake

Faculty Sponsor: Dr. Lakeyta Bonnette-Bailey

The Monster Within Us All

Usman Khan

Faculty Sponsor: Dr. Brendan Balint

STUDENT CENTER EAST 217

The Legend of La Llorona: The Life & Function of a Myth in U.S. Latinx Identity

Maria-Paula Ramirez Wong

Faculty Sponsor: Dr. Randy Malamud

Strength in Numbers: How Black Communities Resist Racialized Violence in Fulton County

Mia Heyward, Emma Alamgir, Jessica Cloud, Amanee Alkhalid, Varsha Sudharsan

Faculty Sponsor: Dr. Jennie Burnet

"A Turbulent Silence": Analyzing the Forms of Protest and Rebellion in Select Novels by J.M Coetzee, Andre Brink, and Sindiwe Magona

Elijah Byrd

Faculty Sponsor: Dr. Renee Schatteman

Female Representation in Children's Animated Movies

Catherine Espinoza

Faculty Sponsor: Dr. Rasha Ramzy

STUDENT CENTER EAST 218

Schizophrenia and Internet

Tayara Wallin-Damon

Faculty Sponsor: Dr. Brendan Balint

Investigating the Effect of Feelings of Isolation Between Autistic Individuals

Marina Fishman, Nora Lane, Yaheimy Rosado, Hakum Lartey

Faculty Sponsor: Dr. Kathryn Crowther

How Social Media Effects the Mental Capacity

Vurabari Naagbi

Faculty Sponsor: Dr. Brendan Balint

The Motivations and Foundational Thought Processes in Early Stages of Philanthropic Giving

Mitchell Harris

Faculty Sponsor: Dr. Alexandra Pauley



Poster Presentations II

2:15 p.m. - 3:30 p.m.



STUDENT CENTER EAST BALLROOM

- 1 **Sex Differences in White Matter Integrity in Children with Developmental Dyslexia**
Gehna Gupta
Faculty Sponsor: Dr. Robin Morris
- 2 **Apathy, Personal Distress, and Empathic Concern in College Students**
Cypress Kuhnel, Holly Aleksonis
Faculty Sponsor: Dr. Tricia King
- 3 **Does Symbolic Representation Aid Relational Abstraction in Monkeys (*Macaca mulatta*)?: An RMTS Experiment**
Kay Lane, Shreya Pendyala, Andres Sanchez, Barbara Church, J. David Smith
Faculty Sponsor: Dr. J. David Smith
- 4 **Examining Behavioral Responses to Inequity and Violations of Expectation in Capuchin Monkeys (*Sapajus [Cebus] apella*)**
Grace Ford, Laila Thurman
Faculty Sponsor: Dr. Sarah Brosnan
- 5 **Exploring the Relationship Between Emotional Awareness and Health Self-efficacy in LGBTQ Youth Participants of SMART Moves**
Gabriann Thomas, Renita Moore, Gabriel Kuperminc
Faculty Sponsor: Dr. Gabriel Kuperminc

- 6 **How Mass Incarceration Effects Mental Health**
Elisa Corena, Amos Deuantaie, Damian Lawson, William Shelton, Cameron Williams
Faculty Sponsor: Dr. Elizabeth Beck
- 7 **Investigating the Role of Rule-based Selective Attention in Implicit Category Learning**
Andrew Fain, Cory Dieter, Andres Sanchez, Barbara Church, David Smith
Faculty Sponsor: Dr. J. David Smith
- 8 **Keeping an Eye on Prospective Memory: The Influence of Motivation on Remembering Future Intentions**
Ashby Boland, Ulyana Simakova, Jonathan Aguilar, Christina Gilkes
Faculty Sponsor: Dr. Andrew Kelly
- 9 **Playing Cat and Mouse: Tracking Down Mouse Movements to Analyze Prospective Memory Retrieval**
Ulyana Simakova, Ashby Boland
Faculty Sponsor: Dr. Andrew Kelly
- 10 **Realism and the Russian-Ukrainian War**
Naomi Bridgers, Isabella Thompson
Faculty Sponsor: Dr. Mark Flowers
- 11 **Are Minorities Susceptible to Carcinogenic Substances Induced by Red 40 Dye, Due to Socioeconomic Status?**
Aja Ashford, Dr. Ernest Alema-Mensah, Dr. Jarrod Lockhart
Faculty Sponsor: Dr. Ernest Alema-Mensah
- 12 **A Comparison of the Dental Morphology of *Australopithecus robustus*, the African Apes and Humans Using Two Scoring Methods**
Victoria Seabolt
Faculty Sponsor: Dr. Frank Williams
- 13 **Jet Performance in sPHENIX**
Damian DaCosta
Faculty Sponsor: Dr. Megan Connors
- 14 **Effects of High-Fat Diet Consumption on Cognition and FGF21 Expression in Mice**
Rowan Lawrence, Hannah Land Lail, Zack Allen, Angela Mabb, Marise Parent, Desiree Wanders
Faculty Sponsor: Dr. Desiree Wanders

- 15 **Blocking Dorsal Hippocampal Astrocytic Glycogenolysis Increases Saccharin Consumption in Male Sprague-Dawley rats.**
Harish Koyya, Christopher Ware, Marise Parent
Faculty Sponsor: Dr. Marise Parent
- 16 **Effects of Constitutive CX3CR1-Cre Expression on Microglial Density and Morphology in the Developing Mouse Brain**
Jonila Shehu, Bhoomi Desai, Fadya Mroue Ruiz, Madison Garvin, Jessica Bolton
Faculty Sponsor: Dr. Jessica Bolton
- 17 **Effects of Constitutive Cx3cr1-Cre Expression on Microglial Volume and Density in the Developing Mouse Brain**
Faith Kamau, Bhoomi Desai, Fadya Mroue-Ruiz, Madison Garvin
Faculty Sponsor: Dr. Jessica Bolton
- 18 **Effects of Perigestational Morphine Exposure on Hippocampal Cell Proliferation in Male and Female Rats**
Jade Kang, Meghan Vogt
Faculty Sponsor: Dr. Anne Murphy
- 19 **Energy Cost and Spike Propagation**
Nutifafa Ayeke, Oghenerume Edward, Jermain Dalton, Anjana Rai
Faculty Sponsor: Dr. Gennady Cymbalyuk
- 20 **Investigating the Synaptic and Hyperpolarization-Activated Mechanisms of Episodic Bursting**
Luke Wohlbach, Mykhailo Fomenko, Gennady Cymbalyuk
Faculty Sponsor: Dr. Gennady Cymbalyuk
- 21 **Resilience of the Leech Heartbeat Central Pattern Generator Against Temperature Variation**
Daniel Khosravinezhad, Cypress Kuhnel, Shinida Chesifu
Faculty Sponsor: Dr. Gennady Cymbalyuk
- 22 **The Mechanisms Underlying Episodic Bursting Activity in the Leech Heartbeat Central Pattern Generator**
Emily Smith, Emily Burns-Kaurin, Mykhailo Fomenko, Gennady Cymbalyuk
Faculty Sponsor: Dr. Gennady Cymbalyuk
- 23 **Fluorinated Indolenine-based Squaraine Near-Infrared Dyes: Synthesis, Characterization, and Optical Properties**
Ken Aratame
Faculty Sponsor: Dr. Maged Henary

24 **Halogenation of Isoxazoles with 4-bromophenyl and 4-chlorophenyl Aryl Substituents**
Mia McMahon
Faculty Sponsor: Dr. Thomas Robilotto

25 **NIR Squaraine Probe Synthesis Based on the Perimidine Heterocycles**
Sara Sarasiya
Faculty Sponsor: Dr. Maged Henary

26 **Finding Antimicrobial Components of Tea Tree Oil to Combat Drug-Resistant Bacteria**
Arcadia Evering, Aaliyah Brumant, Momina Khalid
Faculty Sponsor: Dr. Samantha Parks

27 **Identifying Components of Ginseng Responsible for Its Antimicrobial Properties**
Kayla Mims, Karla Gonzalez Rodriguez
Faculty Sponsor: Dr. Samantha Parks

28 **Comparing Immune Responses of m-cNA-M2e Vaccination via Intramuscular and Intranasal Routes**
Sakinah Muhammad-Worsham, Jannatul Raha
Faculty Sponsor: Dr. Sang-Moo Kang

29 **Confirming SLS Pathway in *Crithidia fasciculata***
Lauren Harrison, Austin Clough
Faculty Sponsor: Dr. Paul Ulrich

30 **Diabetes and COVID: A Literature Review**
Ferris Abu-Ghosh
Faculty Sponsor: Dr. Francisco Cruz

31 **Does the nature of the social bond affect the probability of consolation in Convict Cichlids?**
Maria Lozada, Halima Warsame
Faculty Sponsor: Dr. Edmund Rodgers

32 **Environmental Response to Keystone Species Reintroduction: Analysis of Soil Nutrients and Microbial Biomass from American Bison (*Bison bison*) Fecal Addition**
Milo Vasquez
Faculty Sponsor: Dr. Rebekah Chapman

- 33 **Impact of dlx2 and emx2 Expression in Pair Bonding in Convict Cichlids**
Samsia Anwar, Parin Khalifa, Nibrass Mohamoud, Maheen Nadeem, Fatin Nasreldin
Faculty Sponsor: Dr. Jonathan Sylvester
- 34 **Monogamy in the Face of Opportunity: Mate Assessment and Pair Bonding in Convict Cichlids**
Ricardo Hernandez, Areez Salawu, Mya Mollner, Nate Singleton
Faculty Sponsor: Dr. Edmund Rodgers
- 35 **Phytopharmaceutical Approach to Iron-Dependent Programmed Cell Death of Protozoans**
Muhammed Aslan
Faculty Sponsor: Dr. Paul Ulrich
- 36 **Sonic Hedgehog's Aphroditic Blueprint: A Devoted and Fervent Love Adventure of Convict Cichlid**
Shravya Honne, Arkar Zaw, Marena Essa, Georginna Khammo
Faculty Sponsor: Dr. Jonathan Sylvester
- 37 **The Sense of Smell Determines Partner Preference**
Reeham Victor, Miswakumari Lad, Mohamed Barry
Faculty Sponsor: Dr. Jonathan Blaylock Sylvester
- 38 **Understanding the Role of Yeast Translation Related Proteins in Lipophagy Regulation**
Chetna Batra, Ankit Shroff, Taras Nazarko
Faculty Sponsor: Dr. Taras Nazarko
- 39 **Wnt Side Story**
Jamar Rowe, Nneoma Nwaogwugwu, Anita Amao, Naomie Daniel
Faculty Sponsor: Dr. Jonathan Sylvester
- 40 **The Cannibalization of Film**
Shanty Ward
Faculty Sponsor: Joshua Duddly Greer
- 41 **Wastewater in Quintana Roo: How Inequitable Development Affects Sustainability**
Kelsi Broderick
Faculty Sponsor: Dr. Katy Sparrow

42 **Maternity Home: A Biophilic and Community-Centered Shelter for Expectant Mothers Experiencing Homelessness**
Jessica Grimaldi
Faculty Sponsor: Dr. Catherine Trugman

43 **Synergy: A Mindful Wellness Center for Georgia State University Students**
Nika Lockett
Faculty Sponsor: Dr. Catherine Trugman

44 **The Loss of Authentic Voice: Reexamining Teaching Poetry at a High School Level**
Corey Bryan
Faculty Sponsor: Dr. Lynee Gaillet

45 **Improving Air Quality by Deploying Robots Through Campus**
Halley Wallace
Faculty Sponsor: Dr. Ashwin Ashok

46 **Empirical Exploration of Student Retention and Performance**
Victoria Blount, Jessica Waldrop
Faculty Sponsor: Dr. Jessica Waldrop

47 **Engagement Programing and Assisted Living Residents with Dementia: Understanding Activity Substitutions**
Jasmine Sease
Faculty Sponsor: Dr. Candace Kemp

48 **Methodology & Availability of Spatial Audio & Dolby Atmos Emerging Technologies For Independent & Professional Creatives**
Noah Holland
Faculty Sponsor: Dr. Ben Yonas