



TOWARD SCIENCE WITHOUT WALLS

AAAS | ANNUAL MEETING
Denver, CO | February 15-17

2024 AAAS Student E-poster Competition Winners

PRESENTED BY  Georgia Tech - Irvin Allen College of Liberal Arts
School of Public Policy

The AAAS Student E-poster Competition recognizes the individual efforts of students who are actively working toward an undergraduate, graduate or doctoral-level degree. The winners' presentations displayed originality and understanding that set them apart from their peers. Eligible students can apply to present at the 2025 E-poster Competition starting in the Summer 2024.

BIOCHEMISTRY AND MOLECULAR BIOLOGY

Graduate Student First Place:

Darcy Hunstiger, Colorado State University, *Beyond the Pond: Immobilized Cyanobacterial Biofactories for Sustainable Water Use*

Graduate Student Honorable Mention: Alejandra Flores, Vanderbilt University, *Identities of Packaged Reovirus Defective Viral Genomes*

Undergraduate Student First Place: Tara Young, University of Washington *A DNA Binding Protein Recruits Type II Topoisomerases by Direct Interaction to Promote Replication*

Undergraduate Student Honorable Mention: Thomas Li, University of Chicago, *Proline Hydroxylation of Transcription Factors Regulates Cancer Metastasis*

BRAIN AND BEHAVIOR

Graduate Student First Place:

Arcadia Ewell, Boston University, *Prenatal Growth Is Associated with Infant Heart Rate in South African Infants*

Graduate Student Honorable Mention: Soumilee Chaudhuri, Indiana University, *Vascular Contributions to Alzheimer's Disease: Cardiovascular Polygenic Risk Score (CVD-PRS) in ADNI*

Undergraduate Student First Place: Mikayla Glancy, Arizona State University, *Neuroprotective Effects of ACMSD Across Sex in P301S Tauopathy Mouse Model*

Undergraduate Student Honorable Mention: Ariana Bashar, Arizona State University, *Effect of Mechanical Input on the Adaptive Responses of the Honeybee*

CELL BIOLOGY

Graduate Student First

Place: Marlee Weets, Central Washington University, *Late Prenatal Testosterone Exposure Reduces Ovarian Function*

Graduate Student Honorable Mention: Sarah Williford, University of Alabama at Birmingham, *Elucidating the Role of Glucose Transporter 3 Phosphorylation in Glioblastoma Invasion*

Undergraduate Student First Place: Wimeth Dissanayake, University of Rochester, *Serglycin Regulates Azurophilic Granule Formation In Neutrophils*

Undergraduate Student Honorable Mention: Alex Lu, University of Pennsylvania, *Developing Therapies for OPA1 Disease Using a Humanized C. elegans Model*

DEVELOPMENTAL BIOLOGY GENETICS AND IMMUNOLOGY

Graduate Student First Place:

Mikaela Follmer, University of Colorado, *Unraveling the Interplay of Calcium Signaling and SNARE Proteins in Morphogenesis*

Graduate Student Honorable Mention: Francisco Prista Santos von Bonhorst Silva,

Université libre de Bruxelles, University of Washington, *Differential Entropy as an Indicator of the Development of Pluripotent ICM Cell Populations*

Undergraduate Student

First Place: Sophia

Koutsogiannis, Arizona State University, *Can We Turn Back the Clock on Insecticide Resistance?*

Undergraduate Student

Honorable Mention: Srivatsan

Swaminathan, Arizona State University, *Vaccines Re-establish Homeostasis in a Mouse Collagen-Induced Arthritis Model*

ENVIRONMENT AND ECOLOGY

Graduate Student First Place:

Luis Torrens Sotomayor, University of Puerto Rico-Mayaguez, *Dried Whole Puerto Rican Ipomoea batatas and Artocarpus altilis Particles for Tablet Compaction*

Graduate Student Honorable

Mention: Akorede Seriki, University of Idaho, *Overcoming Formaldehyde Toxicity is Critical to Using Lignin-Derived Aromatics*

Undergraduate Student

First Place: Adriana

Villanueva-Cruz, University of Puerto Rico-Rio Piedras, *Stream Flow Reduction Influences Riparian Web-building and Habitat Use*

Undergraduate Student

Honorable Mention:

Samantha Velasco, Eckerd College, *Analyzing The Correlation Between Lunar Phase and Diel Vertical Migration*

MEDICINE AND PUBLIC HEALTH

Graduate Student First Place:

Maria Barra, Rice University, *Multiplexed Loop-Mediated Isothermal Amplification Assay for High-risk HPV Detection*

Graduate Student Honorable

Mention: Yuming Sun

, Georgia Institute of Technology, *Modeling the Spread of Circulating Vaccine-Derived Poliovirus Type 2 Outbreaks and Interventions*

Undergraduate Student

First Place: Moira

MacCatherine, Arizona State University, *An Assessment Scale and Care Recommendations for Neonatal Opioid Withdrawal Syndrome*

Undergraduate Student

Honorable Mention: Puranjay

Gupta, University of Illinois College of Medicine, *Cardiac Toxicity Induced from Implant Ions and Particles in H9C2 and Stem Cell Lines*

PHYSICAL SCIENCES

Graduate Student First Place:

Sam Kipp, Drexel University, *Sulfuranides: An Anionic 10-S-3 Coupling Paradigm*

Graduate Student Honorable

Mention: Megan Cassingham,

University of Southern California, *Ordered Inorganic-Organic Hybrids Can Form with Different Organic Cation Species*

Undergraduate Student

First Place: Lyssa Lini

, Colorado State University, *Using Chemical Tracers in the Miami River for Phosphorus Source Apportioning*

Undergraduate Student

Honorable Mention: Hamza

Patwa, University of Texas at San Antonio, *Single-photon Superradiance in Realistic & Idealized Collectives of Two-level Systems*

SCIENCE AND SOCIETY

Graduate Student First Place:

Erin Jackson, Colorado State University, *Agriculture and Climate Change Research Priorities: Outcomes of a Systematic Horizon Scan*

Graduate Student Honorable Mention: Olivia Davis, Arizona State University, *A New Five-Year Review Metric to Evaluate Recovery Under the Endangered Species Act (ESA)*

Undergraduate Student First Place: Naina Misra, Arizona State University, *The Effect of Free Food Events on Inclusivity Among University Students*

Undergraduate Student Honorable Mention: Suhani Dheer, Drexel University, *Cognition and Driving Behavior in Drivers With and Without Multiple Sclerosis*

SOCIAL SCIENCES

Graduate Student First Place: Cindy Vargas, Arizona State University, *Incorporating Fisher Metrics in Assessments of Bycatch Reduction Technologies*

Graduate Student Honorable Mention: Katie Coscia, Middle Tennessee State University, *Perceived Conflict Between Religion and Evolution in Undergraduate Biology Students*

Undergraduate Student First Place: Thomas Robbins, Clarkson University, *Defining Disadvantaged Communities (DACs) for Environmental Justice: Variation & Impact*

Undergraduate Student Honorable Mention: Orchee Syed, Arizona State University, *Pain During Midlife: A Crossnational Analysis of Birthyear Cohort Differences*

TECHNOLOGY, ENGINEERING AND MATH

Graduate Student First Place: Katherine Mossburg, University of Pennsylvania, *Facilitating the Clinical Translation of a Silver Sulfide Nanoparticle Contrast Agent*

Graduate Student Honorable Mention: Md Saifur Rahman, Texas A&M University, *Conductive Hydrogel-based Soft Electronic Implants*

Undergraduate Student First Place: Bikrant Das Sharma, Rice University, *Power Savings in USB Hubs Through a Proactive Scheduling Strategy*

Undergraduate Student Honorable Mention: Satvik Tripathi, Drexel University, *Transfer Learning for Diabetic Retinopathy Classification In Resource-Constrained Settings*



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