UNIVERSITY OF GEORGIA

GEORGIA JUNIOR STEM SYMPOSIUM

ANNOUNCEMENT OF AWARDS

The 2026 Georgia Junior STEM Symposium took place virtually on Thursday, February 26, 2026. Congratulations to all students selected to participate, and a special congratulations to the award winners.

Administered by the Office of Academic Special Programs at the University of Georgia Center for Continuing Education & Hotel, the Symposium is a statewide research paper and virtual presentation competition for Georgia students in grades 9-12 who engage in research investigations in the sciences, technology, engineering, or mathematics (STEM).

To be selected for Symposium, student research papers were reviewed by a team of STEM researchers and industry professionals. Based on this review, 45 students were invited to present their work at the virtual Symposium and compete for category awards. These projects represent the finest efforts of high school students in the state toward original laboratory, field, or applied STEM research.

BIOMEDICAL SCIENCE

1st Place — **Lara Otico, McIntosh High School**
Analyzing the Efficacy of PLA-PEG-PLA Triblock Copolymers as Dynamic Self-Assembling Cell Scaffolds to Treat Axon Degeneration in Neurodegenerative Disease

2nd Place — **Damian Go, GSMST**
Developing a Rapid Diagnostic Test to Detect Plasmodium malariae

3rd Place — **Abigail Abraham, Paul Duke STEM High School**
Investigating the Pulmonary Effects of Cornu aspersum from Long Term VOC Exposure

CHEMISTRY & MATERIALS SCIENCE + PHYSICAL SCIENCE

1st Place — **Lamis Diab, GSMST**
Prevent Cough Syrup Poisonings with Color-Changing Polymer Films

ENGINEERING & TECHNOLOGY + MATH & COMPUTER SCIENCE

1st Place — **Achita Sharma, North Paulding High School**
Converting Footfall into Electricity

ENVIRONMENTAL SCIENCE

1st Place — **Amanda Tiruwuha, GSMST**
Rapid In-Vivo Detoxification and Detection of the Neurotoxin β-ODAP in Famine Proof Grasspea Using Low-Cost Layered Mulch Composites and Portable Colorimetric Paper Detector

2nd Place — **Akshaj Dewan, FCS Innovation Academy**
A Bioassay Framework for Quantifying and Mitigating Tetracycline-Induced Disruption in Soil Microbial Communities

ENVIRONMENTAL SCIENCE

1st Place — **Amanda Tiruwuha, GSMST**
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2nd Place — **Akshaj Dewan, FCS Innovation Academy**
A Bioassay Framework for Quantifying and Mitigating Tetracycline-Induced Disruption in Soil Microbial Communities

LIFE & BEHAVIORAL SCIENCE

1st Place — **Sarah Sial, North Oconee High School**
Efficacy of Bacillus thuringiensis israelensis (Bti) for the Control of Simulium vittatum, a Medically Significant Black Fly Species

Honorable Mention — **Maya Botelho, Paul Duke STEM High School**
Effects of PFAS Exposure on Inherited Epigenetics in C. elegans

MEDICINE & HEALTH

1st Place — **Maya Muthu, Walton High School**
Baseline Hippocampal Lateralization and Future Cognitive Risk

2nd Place — **Ishaan Patel, GSMST**
Optimizing Polyphenol Bioavailability for Improved Cancer Therapy

Awards sponsored by:

UNIVERSITY OF GEORGIA Center for Continuing Education & Hotel

Georgia Science Teachers Association

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SELECTED PRESENTERS

The 2026 Georgia Junior STEM Symposium took place virtually on Thursday, February 26, 2026. The following students were selected as presenters for the event.

Abigail Abraham, Paul Duke STEM High School
Investigating the Pulmonary Effects of Cornu aspersum from Long Term VOC Exposure

Charis Abraham, Gwinnett School of Mathematics, Science & Technology
NaBu Nanoparticles as a Preventative Strategy for BBB Dysfunction

Anirudh Aravind, Alpharetta High School
Pecan Production Spatial Suitability Analysis for New Pecan Orchard Location

Arnav Awasthi, Gwinnett School of Mathematics, Science & Technology
Spatial Modeling of Hypoxia and Drug-Tolerant Persister Cells

Maya Botelho, Paul Duke STEM High School
Effects of PFAS Exposure on Inherited Epigenetics in C. elegans

Akshaj Dewan, FCS Innovation Academy
A Bioassay Framework for Quantifying and Mitigating Tetracycline-Induced Disruption in Soil Microbial Communities

Lamis Diab, Gwinnett School of Mathematics, Science & Technology
Prevent Cough Syrup Poisonings with Color-Changing Polymer Films

Abhijeet Ghosh, Walton High School
Gold Nanoparticles in Medicine: A Multifaceted Study Into Anti-Cancer Properties

Damian Go, Gwinnett School of Mathematics, Science & Technology
Developing a Rapid Diagnostic Test to Detect Plasmodium malariae

Aniyah Hudson, Paul Duke STEM High School
Comparing Fish Skin Grafts for Burn Wound Healing in the Philippines

Ryan Joshi, Johns Creek High School
Digital Projector Driven Cell Apoptosis for Tissue Editing

Elyse Khieu, Gwinnett School of Mathematics, Science & Technology
Phosphomimetic Substitution in Inhibiting Mutant p53 Aggregation

Bori Kim, Gwinnett School of Mathematics, Science & Technology
Astaxanthin Treatment on Iron-Sensitized Oxidative Stress

Yohan Kim, Gwinnett School of Mathematics, Science & Technology
Phylogenetic Analysis of SF1/SF2 Helicase Markers for TCGA Cancer

Aaditya Kulkarni, Walton High School
Enhancing Medication Safety Through Near Field Communication-Assisted Medication Logging and Verification in Home Settings

Kangmin Lee, North Oconee High School
Geometrical Design of Dissolving Microneedles: An Aspect Ratio-Based Analysis

Wendy Li, North Oconee High School
AI-Driven Low-Cost 3D Printing Platform for Next-Generation Biomedical Devices

Akshadha Mehta, Wheeler High School
FAP-BRIX+: A Practical Solution to Organic and Plastic Waste Pollution

Dhruv Mehta, Gwinnett School of Mathematics, Science & Technology
Translating Cross-Disease Genomics into DLB Biosensor Diagnostics

Keelin Murray, Woodstock High School
The Effect of Alfalfa's Nitrogen Output on Chlorella Growth for Biofuel Production and Potential Applications in Applied Systems

Maya Muthu, Walton High School
Baseline Hippocampal Lateralization and Future Cognitive Risk

Aarav Nagar, FCS Innovation Academy
Quantum-Inspired Neural Networks vs. Traditional Artificial Neural Networks: A Comparative Analysis of Stock Market Predictive Performance

Rebanto Nath, FCS Innovation Academy
Propagation and Impact of Hallucinations in Multi-Agent Systems

Continued →

Lara Otico, McIntosh High School
Analyzing the Efficacy of PLA-PEG-PLA Triblock Copolymers as Dynamic Self-Assembling Cell Scaffolds to Treat Axon Degeneration in Neurodegenerative Disease

Ishaan Patel, Gwinnett School of Mathematics, Science & Technology
Optimizing Polyphenol Bioavailability for Improved Cancer Therapy

Krish Patel, Gwinnett School of Mathematics, Science & Technology
Enhancing Thermal Transport in β-Ga_2O_3 via Phonon Funneling

Shawn Sabat, Northview High School
Artificial Intelligence Supported Remote Forest Evapotranspiration Estimation Algorithm Development with ECOSTRESS and SMAP Remotely Sensed Information in Southwest Georgia

Suryansh Sahitya, FCS Innovation Academy
Watershed Dynamics Study to Determine Correlation with Fish Production in Chattahoochee River

Spencer Schenke, Paul Duke STEM High School
Developing a Machine Learning Model To Predict Neurological Outcomes From Kidney Function Biomarkers

Keshvee Sekhda, North Gwinnett High School
Cancer Detection via Irreducible Regulatory-Metabolic Coupling Using a Topology-Aware Dual-Modality Nanobiosensor with Information-Theoretic Validation

Achita Sharma, North Paulding High School
Converting Footfall into Electricity

Geonhee Shin, Gwinnett School of Mathematics, Science & Technology
Enhancing Qubit Coherence via Noise Prediction and Control Barriers

Srividya Shivashankar, Paul Duke STEM High School
Analyzing Presence of Media Bias in News Outlets & Effect on Both Providers and Consumers

Shadipto Shouhardo, Gwinnett School of Mathematics, Science & Technology
ThyroTrack: A Holistic Deep Learning Platform for Longitudinal Thyroid Nodule Characterization and Endocrinal Cancer Prognosis

Sarah Sial, North Oconee High School
Efficacy of Bacillus thuringiensis israelensis (Bti) for the Control of Simulium vittatum, a Medically Significant Black Fly Species

Noah Sitaf, Wheeler High School
Computational Engineering of Lactic Acid–Binding Cage Proteins to Modulate the Glioblastoma Tumor Microenvironment

Minju Suh, Gwinnett School of Mathematics, Science & Technology
Dual-Probe Minigene Quantifies F5 Exon 13 Variant Splicing

Zachary Thomas, Rockdale Magnet School for Science & Technology
Moss: Examining Decay and Survivability Responses Under Air Pollution and Pathogen Stress

Amanda Tiruwuha, Gwinnett School of Mathematics, Science & Technology
Rapid In-Vivo Detoxification and Detection of the Neurotoxin β-ODAP in Famine Proof Grasspea Using Low-Cost Layered Mulch Composites and Portable Colorimetric Paper Detector

Garrett Torres, Oconee County High School
PrognosTx-GI: An Artificial Intelligence-Enabled Multiscale Prognostic Framework with Tumor Growth Dynamics Modeling of Adjuvant Chemotherapy Initiation Delays in Stage III Colon Adenocarcinoma

Erick Vega, Paul Duke STEM High School
Creating a Program to Assist Undocumented Hispanic Immigrants with Attending Post-Secondary Education

Chloe Woo, Northview High School
The Effect of Scytonemin on E. coli Inactivation During Solar Water Disinfection (SODIS)

Sophia Yang, Douglas County High School
Early Differentiation of Dementia with Lewy Bodies and Parkinson's Disease Dementia Using Electronic Health Record Data and Machine Learning

Crystal Zheng, Gwinnett School of Mathematics, Science & Technology
Transforming Toxin Therapy Targeting Indoxyl Sulfate

The Symposium is administered by the Office of Academic Special Programs (OASP) at the University of Georgia Center for Continuing Education & Hotel ("Georgia Center"), a unit of Public Service & Outreach.

The Georgia Center creates an environment that fosters curiosity and growth through authentic learning experiences. As a prominent gateway to the University, the Georgia Center serves to foster professional and personal growth through educational programs and partnerships and to create an engaging and inclusive environment that supports intellectual exchange.

OASP seeks to equip Georgia's pre-college students to succeed and flourish in an increasingly complex and highly technical world by becoming problem solvers, critical thinkers, inquirers, reflective learners, and productive and influential members of their communities.