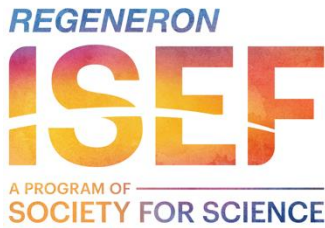


**REGENERON**



# Regeneron Greater Capital Region Science and Engineering Fair, Inc.

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Hosted by Rensselaer Polytechnic Institute, Troy, NY  
March 15, 2025

**Presenting Sponsor**

**REGENERON**

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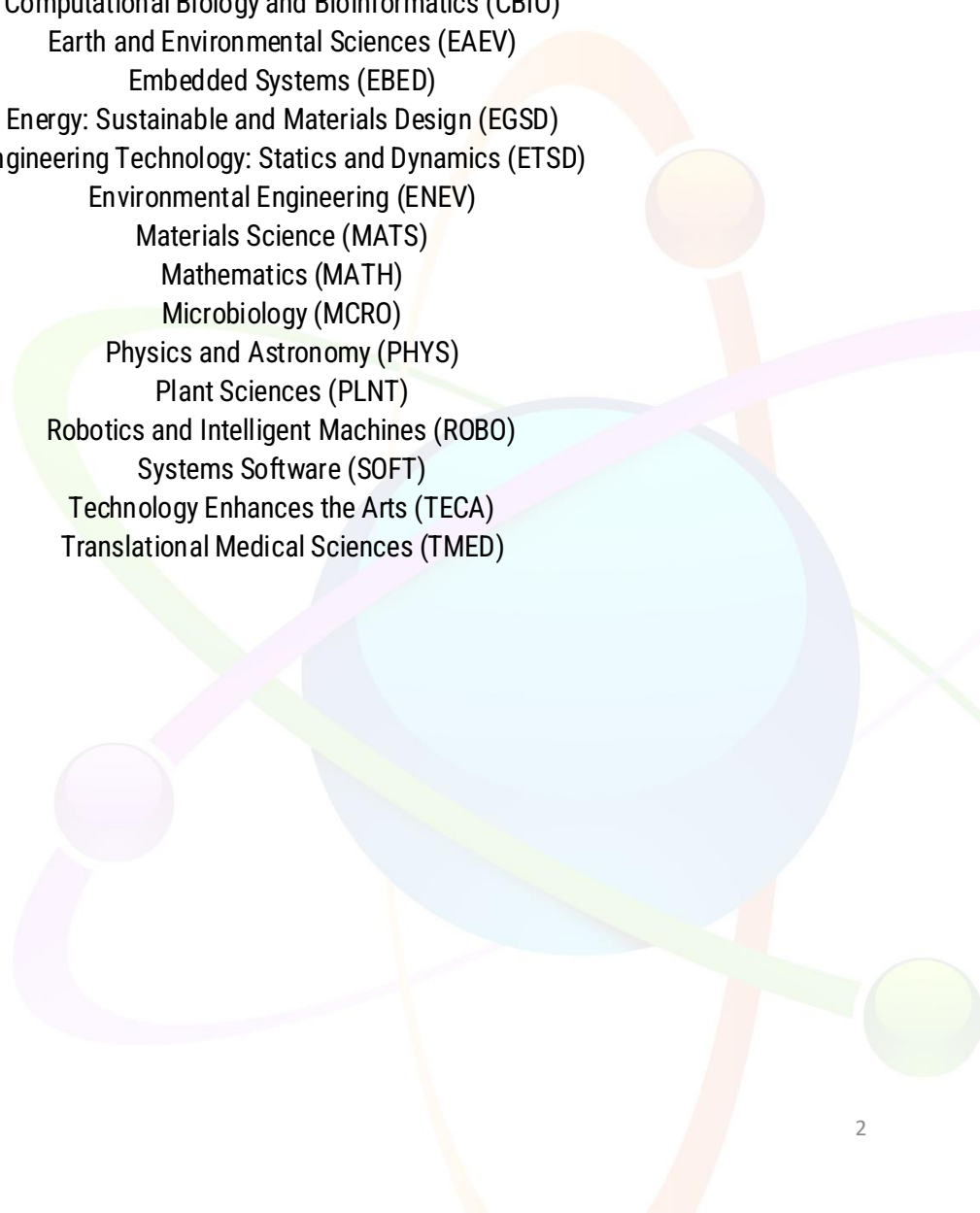
**MOMENTIVE™**

# GCRSEF Program

## March 15, 2025

Time	Event
7:30-8:30 A.M.	Students arrive and set up projects (breakfast available in Sage Lobby)
8:00-9:00 A.M.	Judges receive orientation (Dr. Matt Nielsen and Dr. Dan Norton)
8:30-8:45 A.M.	Safety Check
8:35-8:55 A.M.	Welcome to students and important information (Joan Wagner, Fair Director and Gina Reals, Co-Director), Sage Auditorium
9:00-11:30 A.M.	Morning student interviews
11:30-12:25 P.M.	Lunch (served outside Sage Auditorium), book lottery (In Sage Auditorium)
12:30-2:20 P.M.	Afternoon student interviews
2:30-4:00 P.M.	Open to public
4:00-4:15 P.M.	Cleanup exhibit area. Pack up projects or leave outside of competition room to pick up after awards ceremony. Walker Lab - place projects clips in box by door of room. Sage Lab - leave clips in box outside of Sage Auditorium.
	<b>Presentation of Awards</b>
4:30-6:30 P.M.	Reception and Awards Ceremony: DCC 308 (Follow signs)
<b>Special Awards</b>	Presented by Dr. Matt Nielsen, GE Vernova Research and Dr. Dan Norton, Regeneron Pharmaceuticals, Coordinating Judges
<b>Grand Prize Awards</b>	Administrative Dean of the Rensselaer School of Science: Dr. Charles Stewart
<b>\$50,000 Rensselaer Scholarship</b>	Dr. Charles Stewart

## 22-Project Category Abbreviations



Animal Science (ANIM)  
Behavioral and Social Sciences (BEHA)  
Biochemistry (BCHM)  
Biomedical and Health Sciences (BMED)  
Biomedical Engineering (ENBM)  
Cellular and Molecular Biology (CELL)  
Chemistry (CHEM)  
Computational Biology and Bioinformatics (CBIO)  
Earth and Environmental Sciences (EAEV)  
Embedded Systems (EBED)  
Energy: Sustainable and Materials Design (EGSD)  
Engineering Technology: Statics and Dynamics (ETSD)  
Environmental Engineering (ENEV)  
Materials Science (MATS)  
Mathematics (MATH)  
Microbiology (MCRO)  
Physics and Astronomy (PHYS)  
Plant Sciences (PLNT)  
Robotics and Intelligent Machines (ROBO)  
Systems Software (SOFT)  
Technology Enhances the Arts (TECA)  
Translational Medical Sciences (TMED)

# Science Fair Judges

Last Name	First	Name
Ahmed	Humza	Regeneron
Backes	Benjamin	GE HealthCare
Bavda	Varun	Wadsworth Center, NYSDOH
Boiani	Sophia	Regeneron
Braunstein	Jeffrey	University at Albany
Carpentier	Jared	Regeneron
Chaturvedi	Seema	Siena College
Czwakiel	James	Rensselaer
Dawdy	Michael	NNL
Dey	Swarup	Regeneron
DiFranzo	Susan	Hudson Valley Community College
Doherty	Mark	GE Vernova Advanced Research Center
Douglass	Steven	Fluor Marine Propulsion, LLC
Drislane	Lisset	University at Albany
Fisher	Liz	Neural Stem Cell Institute
Flood	Caitlyn	Adirondack Environmental Services
Gregg	Brian	Curial Global
Guha	Sanjukta	Benoit Bovin
Hall	Andrew	Naval Nuclear Laboratory
Hanrahan-Twohig	Jennifer	Regeneron
Harm	Ryan	Regeneron Pharmaceuticals Inc.
Hart	Greg	Globalfoundries
Ikhimiukor	Odion	Health Research Inc./ New York State Dept. of Health
Jones	Lauren	Regeneron Pharmaceuticals
Kessler	Scott	Northeast Grocery
Koester	Nicholas	Regeneron
Patel	Prasanta	Regeneron

# Science Fair Judges

Last Name	First Name	Employer
Lambropoulos	John	Regeneron
Latta	Dave	RPI/U.S. Navy
Lewis	Larry	Retired GE
Lindsay	Meryl	Regeneron Pharmaceuticals
Maring	Brittney	Regeneron
Nagarajan	Kirthivasan	SI Group
Nam	Xinyi	National Grid
Natole	Michael	Regeneron
Newsham	David	Momentive Performance Materials
Nowak	Tristan	Pfizer
Padellan	Malik	Regeneron Pharmaceuticals
Peters	Chloe	Regeneron Pharmaceuticals
Powers Beggs	Bridget	National Grid
Prematilake	Keshika	Regeneron
Rohr	Don	Plug Power
Rokicki	Corelle	Regeneron
Salami	Timi	Regeneron
Schmidt	Christopher	Regeneron Pharmaceuticals
Sears	Tracy	Regeneron
Shukla	Piyush	Momentive Performance Materials
Taylor	Hy	US Air National Guard
Taylor	Iilani	ESGR Volunteer
Torelli	Amanda	Regeneron
Ventrice	Carl	SUNY Albany
Williams	James	Regeneron
Chaturvedi	Phil	Regeneron Pharmaceuticals
Cho	Christine	Regeneron Pharmaceuticals

# Junior Division Projects (T = Team)

Project Number	Name	Sage Floor	Grade	Project Title
J-ANIM-007	Leia Cannon	4	8	What will the Ladybugs Choose?
J-ANIM-008	Morgan Colby	4	8	Let the Mealworms Eat! the Effect of Meal worms Decomposing Styrofoam on the Soils Total Nitrogen Levels
J-BMED-029	Rohith Kulkarni	5	8	Analysis of the Relationship Between Heart Rate Variability (HRV) and Physical and Mental State for Healthy Youth
J-CHEM-049	Aanya Bharti	5	8	What Is The Effect of Heat Exposure on the Integrity of a Plastic Bottle?
J-EAEV-002	Scarlet Connelly	4	7	Can Biodegradable Hydrogels Hold Their Water
J-EAEV-024	Madeline Hall	4	8	Long Term Investigation of the Water Quality of Sand Creek
J-EAEV-031	Annabel Krattinger	4	7	Canine and Feline Populations
J-EAEV-084	Tahreem Islam	4	8	What Is the Effect of Sunscreen Use on Freshwater Ecosystems?
J-EAEV-095	Alina Song	4	8	What Preventative Measures Can Be Used to Combat Train Pollution to Nearby Homes and Vehicles?
J-EGSD-003 T	Dillan Davis	5	7	Which One Will Die First?
J-EGSD-003 T	Lillian Elkins	5	7	Which One Will Die First?
J-EGSD-003 T	William Nolan	5	7	Which One Will Die First?
J-EGSD-010	Advay Gupta	5	8	Generating Energy Using Renewable Sources
J-ENBM-074	Winston Banks	5	8	Implications of CAD 3D-Printed Soft Robotics as Better Surgical Tools in the Removal of Benign and Malignant Soft Tumors
J-MATS-028	Samuel Fowler	5	7	Which Foam to Protect the Dome
J-MATS-030	Giulietta Gargano	5	7	Problem or Protectant? How Clean is Your Sunscreen?
J-MATS-086	Sharvesh Srinivasan	5	8	Reaction time of Nickel-Titanium Artificial "Muscles" under 0.5 Amperes-5.0 Amperes
J-PHYS-022	Davis Barron Jr	5	8	Complicated Coasters: The Study of Rollercoasters and How to Make them Safer
J-PHYS-032	Rory Moore	5	7	How Fast Will it Fall?
				How Do Mirror Shape and Position Impact the Visibility of
J-PHYS-078	Kritik Gusain	5	8	Telescopes Like the James Webb?
J-PLNT-001 T	Olivia Baker	4	7	The Effect Of Different Types Of Paper on Seed Germination
J-PLNT-001 T	Cassidy Carpenter	4	7	The Effect Of Different Types Of Paper on Seed Germination
J-PLNT-001 T	Bryce Saunders	4	7	The Effect Of Different Types Of Paper on Seed Germination
J-PLNT-006	Isabel Pelech	4	8	Growing Green
J-PLNT-019	Gabrie Radovich	4	8	One Bad Apple Spoils the Bunch: The Effect of Ethylene Gas Inhibitors on the Ripening of Apples
J-PLNT-020	Amelia Cripps	4	8	The Effect of Tomato Ripeness on Vitamin C Content in Tomatoes
J-PLNT-021	Jacob Lavoo	4	8	Growing to the Stars
J-PLNT-023	Bonnie Stone	4	7	Do Microorganisms Help Plants Grow?

# Senior Division Projects (T=Team)

Project Number	Name	Walker Room	Grade	Project Title
S-ANIM-038	Jenna Dunbar	5219	12	Survey of Supplement Use Across Various Equine Disciplines in the United States
S-ANIM-039	William Sherman	5219	12	Genetic Insights into the History of Domesticated Chickens: An Analysis of Puerto Rican Chicken Mitochondrial DNA
S-ANIM-098	Landon Fantasia	5219	12	Using the Florida Fish and Wildlife Conservation Morality Table to find the Connection Between Manatee Cause of Death and Place of Death
S-ANIM-124	Michael Hauser	5219	12	The Effects of Different Sound Frequencies (Hz) on Dogs' Body Language: A Study of Behavioral Responses to Various Auditory Stimuli
S-BEHA-012	Emma Gowen	6113	12	Developing a Qualitative Understanding of the Experience of a Dancer's Self-critical Perfectionism and Disordered Eating Habits
S-BEHA-016	Eliot Helicke	6113	11	Differences in Social Determinants of Health and Adverse Childhood Experiences in Transgender and Gender Diverse Patients versus Cisgender Patients in a Rural-Based LGBTQIA+/Family Practice
S-BEHA-026	Layla Roy	6113	12	Striking a Chord: The Effect of Tempo on High School Student Recall
S-BEHA-033	Umaiza Shah	6113	12	Using the Pediatric Sleep Questionnaire (PSQ) to Determine The Impact of Snoring and Sleepiness on Behavior of School-Aged Children
S-BEHA-036	Emilia Hall	6113	11	Cultural Considerations in Adolescent Mental Health in Uganda: A Mixed Method Study
S-BEHA-044	Karlie Shatoff	6113	12	The Science of Ancient Art: Cylinder Seals in Mesopotamia
S-BEHA-058	Makenzie Keir	6113	11	The Effect of High And Low Intensity Of Red And Blue Light on Circadian Rhythm In Drosophila Melanogaster
S-BEHA-067	Zoe Reiss	6113	11	Identifying the Unmet Needs of High School Menstruators to Manage Menstruation
S-BEHA-068	Chloé Falchuk	6113	12	The Friendship Formula: Untangling Human Loneliness, Personality and AI's Ability to Predict Them
S-BEHA-075	Gideon Dunbar	6113	12	Merry Melodies: The Effect of Preferred Music on the Focus of Potentially ADHD High School Students
S-BEHA-083	Dea Hull	6113	12	Does Visual-Spatial Working Memory Capacity Increase During Adolescence?
S-BEHA-087	Darwin Cardona	6113	12	The Connection Between Music Usage and Levels of Anxiety/ Stress in College Students
S-BEHA-088	Victoria Gvozdeva	6113	11	Attention Allocation during Truth-telling vs. Lying: An Eye-Tracking Study with Dynamic, Naturalistic Stimuli
S-BEHA-099	Maddy LaPan	6113	12	The Effects of Age on the Social Lives of children With Tourette Syndrome; A Comparison Study
S-BEHA-104	Pravin Jegan	6113	12	The Effectiveness of White Noise as A Coping Strategy for Misophonia
S-BEHA-106	Ashley Mallay	6113	12	A Cross-Sectional Study on the Effects of Artificial Intelligence Mental Health Counseling on Injured Student-Athletes' Recovery Time to Play

# Senior Division Projects Continued

Project Number	Name	Walker Room	Grade	Project Title
S-BEHA-113	Ella Cherian	6213	12	Traumatic Experiences and Their Impact on Adolescence Education
S-BEHA-114	Ei Aung	6213	12	The Nutritional Value of Food Choices Following the Ending of SNAP Emergency Allotments
S-BEHA-115	Veronica Wolnicki	6213	12	Effects of Blue Light Filtering Lenses in Adolescent Women with Premenstrual Syndrome-Induced Insomnia
S-BEHA-120	Divyansh Pramanick	6213	12	Analyzing Locomotion in Optogenetically Stimulated <i>Drosophila melanogaster</i>
S-BEHA-126	Daniel Zivan	6213	12	Juxtaposing The Psychological and Therapeutic Impact of 432 Hz and 440 Hz Music Tuning
S-BMED-009	Gabriella Rakhlin	3214	12	Mindful Steps - Establishing Associations Between Neural Correlates of Dual-task Walking and Cognitive Ability
S-BMED-011	Sloane Mulcahy	3214	12	Testing cognitive Effects of Sleep Deprivation and Memory Consolidation on <i>Drosophila melanogaster</i> in a Post TBI Exposure Period
S-BMED-052	Jerry Fan	3214	10	Metabolism-Related Gene Dysregulation in TBT-Induced Obesity
S-BMED-066	Flora Wu	3214	11	The Impact of Maternal Risk Factors and Drinking Water Contaminants on Cyanotic Congenital Heart Defects
S-BMED-090	Olivia Clarke	3214	12	Association of Inadequate Sleep with Elevated Blood Pressure in a Group of High School Juniors
S-BMED-102	Samya Khan	3214	12	Racial Disparities in Health Impacts of Type 2 Diabetes Patients
S-BMED-103	Bisma Malik	3214	12	The Effect of a 5% Vitamin C and Argan Oil Serum on the Visibility of Post-Inflammatory Hyperpigmentation and the Mental Health of Participants Aged 15-25
S-BMED-109	Harnoor Chilana	3214	12	The Effect of Healthcare, Cultural Beliefs, and Dietary Habits on the Susceptibility of Gestational Diabetes Mellitus in the South Asian population living in the United States
S-BMED-117	Olivia Zhou	3214	10	Teenage Mental Health and It's Connection to the Onset of Alzheimer's Disease Later in Life
S-BMED-119	Samantha Schubert	3214	12	Extended Earbud Usage in Teenagers and the Risk of Noise-induced Hearing Loss
S-BMED-125	Chloe Bevacqua	3214	12	Obstructive Sleep Apnea as a Risk Factor for Retinal Vein Occlusion: Self Reported Versus Confirmed Incidence of Obstructive Sleep Apnea in Patients with Retinal Vein Occlusion
S-CBIO-015	Laken Bergin	3214	11	The Effect of Difference in Sex on Gene Expression in the Frontal Cortex in Patients with DM1.
S-CBIO-055	Aarush Iyengar	3214	11	A Joint Survival and Time-Series Model For Epileptic Seizure Risk Prediction
S-CBIO-057	Jason Lian	3214	10	The Pandemic Gap: Examining Inequality in Healthcare Utilization During Pandemic Disruptions
S-CBIO-065	Andrew Wu	3214	12	The Prognostic and Therapeutic Role of IGFBP6 in Breast Cancer
S-CBIO-093	Yunus Ali	3214	11	Isolating and Classifying VNS-Related event-related potentials (ERPs) as Biomarkers
S-CBIO-116	Shreeya Pulella	3214	12	What is the relationship between the presence of CHIP and the Risk for Inflammation?



# Senior Division Projects Continued

Project Number	Name	Walker Room	Grade	Project Title
S-CBIO-127	Patsy Whalen	3214	12	The Effect of Bruton's Tyrosine Kinase on Glucose Transport in the PLCg2 Pathway Role of Peripheral Myelin Protein 2 as a Potential Therapeutic in Peripheral
S-CELL-013	Kaitlin Munro	5219	12	Demyelinating Neuropathies
S-CELL-027	Gideon Covert	5219	12	The Influence of SPM RvE1 on the ChemR23 Receptor in Severe Aplastic Anemia on T Cells
S-CELL-042	Aleena Saleem	5219	10	Construction of a four-arm DNA Junction for Nanotechnology Applications
S-CELL-047	Ariana Baptista	5219	12	Understanding PUMA-Regulated Genes Under Cellular Stress
S-CELL-073	Carol Wang	5219	12	Assessing the Effects of Succinic Acid on the Morphology of Daoy Cells and 82Q Cell Models of Spinocerebellar Ataxia Type 1
S-CELL-085	Surabhi Krishnan	5219	11	Degradation of the Non-amyloid Component Alpha-synuclein by High Affinity Binding N77D Intrabody.
S-CELL-096	Hasini Anireddy	5219	12	The Effect of Neural Genes NCAM2, THY1, and TENM2 on LDAH Silenced ES-2 Ovarian Cancer Cells
S-CELL-121	Ishika Yalamanchi	5219	11	The Cytokine IL-6 Induces an Antiviral Response in the Vascular Endothelium
S-CHEM-041	Rui Zheng	5219	11	A System for Long-term Continuous Raman Imaging System With Live Cells
S-CHEM-079	Mahima Mukherjee	5219	11	Computational Approaches to Catalytic Screening for Uranium Carbide Waste Management
S-CHEM-100	Sowa Joarder	5219	12	Simple Iridium Catalysts for Alcohol Dehydrogenation with Coupled Proton and Electron Acceptors
S-EAEV-018	Elena Wolpert	6213	12	Combined and Individual effects of Polyethylene and Polystyrene Microplastic exposure on the Locomotive Behavior and Mortality of Ghost Shrimp, Palaemon paludosus
S-EAEV-040	Everitt Li	6213	11	A General Analysis of Magma Composition in the Goat Rocks Volcanic Complex
S-EAEV-043	Ella Bagchi	6213	10	The Effects of Wildfire Aerosols on Phytoplankton Populations in the North Pacific Ocean
S-EAEV-050	Matthew Doherty	6213	12	How Technology Energy Company Performance Correlates with Greenhouse Gas Emissions
S-EAEV-054	Kenadie Hastings	6213	12	The Effects of Bisphenol A (BPA) on Caenorhabditis elegans (C. elegans) Spatial Learning and Memory Across Generations
S-EAEV-059	MaryJane Mazurak	6213	12	The Effects of Temperature Dependent Floral Emergence on Honey Bee Pollination Preferences and Patterns
S-EAEV-070	Zoe Adams	6213	12	Human Health Hazard of Lead in Ballston Lake: Determining How Inflows and the Meromictic Nature Impact Lead Content
S-EAEV-071	Annie Marsh	6213	11	Assessing the Application of Harmful Algae Blooms as Sustainable Source of Biofertilizers
S-EAEV-076	Deandrea Edwards	6213	12	The Relationship Between Water Quality and the Mental Health of Residents in New York Counties
S-EAEV-089	Joe Birnbaum	6213	12	The Effects of Wildfire Intensity on the Regeneration of Pinus rigida Mill. on the Shawangunk Ridge
S-EAEV-092	Saad Ashar	6213	12	Use of Deep Learning to Enhance Cloud Coverage and Movement Predictions in NYS
S-EAEV-097	Adelynn Redinger	6213	12	Impact of Turbidity, Sex, and Size on the Predation Ability of Rusty Crayfish on Chinese Mystery and Banded Mystery Snails
S-EAEV-118	Isabella Barrett	6213	11	The Effects of Varying Oxygen Concentrations on D. Magna Inhabiting Cyanobacterial Environments

# Senior Division Projects Continued

Project Number	Name	Walker Room	Grade	Project Title
S-EGSD-081	Ryan Paris	3109	12	Beyond Transparency: Delving into Thermal Dynamics of Glass and Coatings in Infrared Radiation
S-EGSD-082	Isaiah Flores	3109	12	Examining the Enduring Ramifications of Decommissioning Nuclear Power Plants and Delineating Strategies to Mitigate its Impact Through Alternative Energy Sources.
S-ENBM-034	Yerin Cho	3222	11	Enhancing the Reliability of Electrocardiogram Signals for Stress Management: Learning Transferable Models from High-Resolution Electroencephalogram Supervision
S-ENBM-046	Jason Chen	3222	11	Development of an Adaptive Dielectric Elastomer-based Smart Brace for Injury Prevention and Rehabilitation
S-ENBM-060	Howyue Kaydence Yeong	3222	9	Analysis of Blood Flow in the Human Body Using Computational Fluid Dynamics
S-ENBM-069	Oliver Voutsinas-Klose	3222	12	The Key to Tennis: Plyometric Warm-up and its Effect On Lateral Movement Quickness
S-ENEV-056	Pavithra Jayakumar	3109	12	The Application of Graphene Oxide and Methyltrimethoxysilane Hydrophobic Aerogels on the Adsorption of Oil Spills
S-ETSD-035	Thomas Bundy	3222	12	Evaluating the Effect of a Novelty-Designed Skiing Aid on its Users' Perceived Autonomy and Sport Engagement
S-MATH-122	Niswarth Abraham	3109	12	Combining Pythagorean Tuning and Polar Coordinate Geometry with the Circle of Fifths
S-MATS-048	Sarah Al Shaarawi	6219	12	Synthesis of Sb <sub>2</sub> Te <sub>3</sub> and Ag <sub>2</sub> Te Thermoelectric Nanoparticles in a Commercial Microwave for the Creation of a Novel Thermoelectric Device
S-MCRO-017	Rose Janicke	6219	11	Genomic Analysis of Salmonella enterica Serotype Typhi from Human Clinical Samples in New York State with a Focus on Antimicrobial Resistance Genes and the Mer Operon.
S-MCRO-037	Ariisa Gillani	6219	11	The Effects of Antibiotics on Treatment with Immune Checkpoint Inhibitors in Patients with Advanced Non-Small-Cell Lung Cancer: a Retrospective Study
S-MCRO-062	Riley Schmitz	6219	12	Impacts of probiotics and meditation on gut symptoms and scores on the Perceived Stress Scale in Those with Gut Issues.
S-PHYS-053	Emma Freed	3109	11	Galaxy Quenching in Intermediate Sized Dark Matter Halos
S-PHYS-072	Kaira Rawert	3109	11	Inspiral Merger Ringdown Consistency Tests for Gravitational Wave Signals Using Numerical Relativity Simulations
S-PHYS-077	Jocelyn Elphick	3109	12	The Effect of Void and Tendril Environments on the H1 in Late-type Galaxies Compared to the Morphology Density Relation
S-PHYS-080	Andrew Priest	3109	12	Measurement of a High-Temperature Superconducting Transition with a TDO Magnetometer
S-PHYS-091	Dylan Palmiotto	3109	12	Formation Controls of Martian Linear Gullies In Hellespontus Montes and Aoina Terra
S-PHYS-094	Tejas Jacob	3109	9	Developing an Astrodynamics Framework to Simulate Satellite Trajectories With Applications in Asteroid Deflection
S-PHYS-108	Shane Golio	3109	12	A 3D Computational Fluid Dynamics Analysis on the Effects of Nuclear Heating in the VIPER Cable

# Senior Division Projects Continued

Project Number	Name	Walker Room	Grade	Project Title
S-PLNT-005	Simon Rieffel	6219	12	A Comparison of Exotic Plant Covet in the Interior and Exterior of Fragmented Deciduous Forests
S-PLNT-051	Sydney Edmonds	6219	12	Sorghum Success: Growing the Future Grain by Grain
S-PLNT-111	Samantha Koranteng	6219	12	The Characterization of Resistance to Naturally Occurring Foliar Diseases in Varying Barley Breeding Lines in Regard to Rhynchosporium Commune (barley Scald) by Screening a Differential Set of Barley Lines with Known Resistance Genes
S-ROBO-014	Norah Hoke	3109	12	Design and Evaluation of a Soft Robot for Analyzing the Effect of Silicone Texture on Robot Performance
S-ROBO-045	Khalil Kareem	3109	12	Bulls, Bears, and Brains: Testing Investment Strategies on the NYSE
S-ROBO-130	Titan Spellos	3109	12	Infinite Downwards Complexity in Interactive Virtual Environments
S-ROBO-131	Akshay Muppidi	3109	11	Teaching Robots to Think and See: Vision-Language-Conditioned Control with LLMs
S-TMED-063	Simran Utturkar	3222	12	Improving Adherence to Spinal Cord Injury Exercise Guidelines Using Smartphone-Based Technology

# Teacher Sponsors and Participating Schools

Teacher	School
Andrew Licari	Academy of The Holy Names
Akhtar Kainat Allyson Wieser	Albany Medical College Science Technology Entry Program
Christopher Reddy	Averill Park High School
Regina Reals	Burnt Hills - Ballston Lake CSD
Jonathan Wedvik	Clarkstown High School South
Heidi Gleason	Columbia High School
Sean Mayer	Cornwall Central High School
Jon Calos	Emma Willard School
Michael O'Brien	Germantown CSD
Cortney Barber Nicole Dixson	Greenwich Central School District
Jared Foro Robert Rice	Guilderland High School
Thomas Vartuli	Hudson Falls Central School District
Daniel Maloney	La Salle Institute
Amanda Bates Ashley Geffner	Monroe-Woodbury High School
Kurt Ulrich	New Paltz High School
Laura Favata Meagan Hughes	Niskayuna High School
Katherine Jacobson. Kirsten Kleinman	Nyack High School
Rebecca Goldfischer Peter Robinson	Saratoga Springs High School
Nathaniel Covert	Shaker High School
Nicole Burke	Shaker Junior High School
Wendell Hala	Suffern High School
Linda Hopkins	Taconic Hills High School
Christopher Bianchi	Van Antwerp Middle School

# Awards

## Special Awards

The purpose of these awards is to give recognition to specific areas of science research.

## Regional Awards

These special awards were developed by our Regional Fair and are not offered at the International finals.

Please note, some of the awards are for both divisions and others are for only one of the divisions.

*Monetary awards to teams are shared. Students must download a W-9 Form and Award Winner Letter Form from the GCRSEF website under **Forms** and submit them to Fair Director, Joan Wagner in order to receive the monetary award. Forms can be sent by email to [gcrsef@gmail.com](mailto:gcrsef@gmail.com) or to*

*Joan Wagner, 53 Otter Way, Lake Placid, NY 12946*

### **American Society for Microbiology, Eastern New York Branch**

This award is given to one project that involves research related to microbiology.

**Senior Division Award:** Certificate plus \$100.

**Junior Division Award:** Certificate plus \$60.

### **Brown League Sports Science Award**

The award is presented to the project that uses a scientific approach to further an understanding or improve the performance of a sports-related phenomena. It is in memory of John Stasenکو who first initiated this award.

**Senior Division Award:** \$50 Amazon Card; no teams.

### **Cullen Blake and Deena Mousa Excellence in Science Award**

This award is given to a student who demonstrates both a love of science and the skill for doing science. This is a junior division award only.

**Junior Division Award:** Certificate plus \$100.

### **Curia Global: Passion for Scientific Endeavors Award**

This award goes to individual(s) who demonstrate a passion for scientific discovery and excellence as exemplified in the area(s) of chemistry, materials, environmental or medicinal applications.

**Senior Division Award:** Certificate and \$150.

**Junior Division Award:** Certificate and \$100.

### **Dudley Observatory Award**

The Dudley Observatory offers an award for a project in astronomy or space science. It is given in memory of past president, Sam Wait.

**Senior Division Award:** Certificate plus \$100. No teams.

**Junior Division Award:** Certificate plus \$60. No teams.

### **GCRSEF Excellence in Computer Science Award**

This award is for a project that demonstrates innovative use of computer programs to address an important problem facing society. This award may be given to an individual or a team.

**Senior Division Award:** Certificate and \$200.

### **GlobalFoundries STEM Award**

Awarded to a project that demonstrates creative use of engineering, chemistry, physics, or computer science to address a problem identified in cooperation with community or industry partners.

Junior Division: Certificate + \$75

Senior Division: Ipad

### **Linda Austin DNA Science and Technology Award**

This award is offered for research in DNA science and technology. It is in memory of Linda Austin who brought DNA Science and Technology to many, many schools in the Capital Region.

**Senior Division Award:** Certificate plus \$100.

## Regional Awards (continued)

### **Momentive Performance Materials**

This award is for a project that demonstrates the innovative use of synthetic chemicals to improve the environment and/or quality of life.

**Senior Division Award:** Certificate plus \$100.

**Junior Division Award:** Certificate plus \$60.

### **National Association of Biology Teachers**

This award is given an outstanding project in the life sciences.

**Senior Division Award:** Certificate and \$75.

**Junior Division Award:** Certificate and \$50.

### **National Grid Award for Energy and the Environment**

The award is presented to individual(s) with a research project/exhibit that includes consideration and/or achievement in energy reduction, sustainability or reduced impact to the environment.

**Senior Division Award:** Certificate plus \$100.

**Junior Division Award:** Certificate plus \$60.

### **Price Chopper's Golub Foundation Award in Memory of Jane Golub**

This award is for a project in nutrition that promotes good health.

**Senior Division Award:** Certificate plus \$100.

**Junior Division Award:** Certificate plus \$60.

### **Regeneron George Yancopoulos Award**

Awarded to the project that demonstrates the most creativity in improving or identifying health issues in an individual.

**Senior Division Award:** Certificate plus \$750.

**Junior Division Award:** Certificate plus \$250.

### **RPI Scholarship**

This award is given to outstanding project for grades 9-11. The Planning committee for the Fair reserves the right whether or not to offer this award. (No teams).

**Senior Division Award:** \$50,000

### **Scientific American Magazine Award**

This award is a one year subscription to Scientific American to senior division grand prize awardee

### **SI Group Smart Chemistry Award**

This award will be presented to a project that demonstrates ingenuity in utilizing chemistry to promote environmental sustainability.

**Senior Division Award:** Certificate plus an Apple iPad mini (no teams).

**Junior Division Award:** Certificate plus \$100.

### **STANYS: Eleanor Miller Reed Science Research Award**

This award is given to a project that "captures the spirit of science research."

**Senior Division Award:** Certificate and \$100.

**Junior Division Award:** Certificate and \$60.

### **UAlbany CNSE Design for Society Award**

This award is to a project that demonstrates a creative use of engineering or computer science to address a problem identified in cooperation with community or industry partners.

**Senior Division Award:** Certificate and \$100 gift card

### **UAlbany CNSE Scholarship**

This UAlbany CNSE scholarship, which provides \$2000 in annual support for non-tuition academic expenses, will support a student who: 1) participated in the Greater Capital Region Science and Engineering Fair; and 2) selects a major housed within the College of Nanotechnology, Science, and Engineering (CNSE).

### **Walter Eppenstein Physics/Astronomy Award**

This award is for an outstanding physics or astronomy project. It is in memory of Professor Walter Eppenstein, who brought this science fair to RPI.

**Senior Division Award:** Certificate plus \$75.

**American Psychological Association** This award recognizes outstanding research in psychology under the category of behavioral and social sciences or any category related to psychology (e.g., animal sciences, biochemistry, computer science, environmental science, mathematical science, medicine and health).

**Senior Division Award:** Certificate.

### **Association for Women Geoscientists**

This award is offered to female students. Teams with at least one female are also eligible. These projects should exemplify high standards of innovativeness and scientific excellence in the geosciences. Special consideration will be given to projects that increase the public awareness of geosciences, illustrate the interdisciplinary nature of the geosciences or promote the sensitivity to Earth as a global system.

**Junior Division Award:** Certificate.

### **Department of Defense (DoD) STEM Leadership Prize**

This prize acknowledges the middle school student or team that demonstrates excellence in STEM, as well as the problem-solving skills and determination to overcome challenges throughout the research project.

**Junior Division Award:** Certificate and \$100.

### **Lemelson Early Inventor Prize**

This award is offered to an individual or team who: (1) Demonstrates problem-solving by identifying a critical problem; (2) Applies empathy and STEM knowledge to find a practical solution; (3) Displays entrepreneurial thinking by developing a tangible invention; (4) Ideally exemplifies environmentally-responsible thinking in their research and creation of the project.

**Junior Division Award:** Certificate plus \$100, to be shared if a team.

### **NASA Earth System Science Award**

This is for a project exhibiting a clear and focused purpose on Earth System Science that is testable using the science process. Founded in 1958 by President Dwight D. Eisenhower, NASA's mission is to pioneer the future in space exploration, scientific discovery and aeronautics research, answering basic questions like: What's out there in space? How do we get there? What will we find?

**Senior Division Award:** Certificate.

### **National Oceanic and Atmospheric Administration (NOAA) "Taking the Pulse of the Planet" Award**

This award goes to research that emphasizes NOAA's mission of science, service and stewardship in climate, weather, ocean and coastal sciences.

**Senior Division Award:** Certificate, Letter and Medallion.

### **Regeneron Biomedical Science Award**

This award is offered to a project in one of the following categories: Biochemistry, Biomedical & Molecular Biology, Cellular and Molecular Biology, Computational Biology & Bioinformatics, Microbiology and Translational Medical Science. The research has all or some of these attributes: (1) Lead with Science: Demonstrate command of and passion for science, (2) Take on Big Ideas: Exemplify traits of a driven thinker, (3) Make it Happen: Demonstrate flexibility and a continuous learner mindset, (4) Be Great Together: Embodies traits of an inspiring leader, (5) Do What's Right: Embody a drive to use science for good.

**Senior Division Award:** Certificate plus \$375.



### **Regional Ricoh Sustainable Development Award**

This award recognizes projects that demonstrate outstanding efforts in addressing issues of environmental responsibility and sustainable development.

**Senior Division Award:** Certificate.

### **Scientific American Subscription**

Scientific American recognizes outstanding student research. This award goes to the six grand prize awardees.

**Senior Division Award:** Certificate and one-year subscription to Scientific American.

### **Society for *In Vitro* Biology**

To be awarded to the most outstanding 11th grade student exhibiting in the areas of plant or animal *in vitro* biology or tissue. If there are no 11th graders available for award, it can be offered in other senior division grades.

**Senior Division Award:** Certificate.

### **Stockholm Junior Water Prize (SJWP)**

This is for the best projects related to water quality, water resource management, water protection, water treatment or wastewater treatment. Up to three senior division awards may be given.

**Senior Division Award:** Certificate plus invitation to compete in the State Competition. Up to three awardees may register to compete in the State competition by April 15th. Ten finalists at the Regeneron International Fair will receive an all expense trip to Stockholm, Sweden where they will represent the United States to compete in the International Stockholm Junior Water Prize competition. Each winner must complete the online form to compete at the higher level.

### **USAID From the American People**

This award is given to a humanitarian project that holds the potential to improve lives around the world. It addresses health and environmental problems facing the world such as clean water, sustainable food, energy production, climate change and health.

**Senior Division Award:** Letter and Certificate.

### **U.S. Air Force**

This award is given in any area of science and engineering (two junior and two senior awards). No teams.

**Senior Division Award:** Certificate and gift.

**Junior Division Award:** Certificate and gift.

### **U.S. Metric Association**

This is for a student whose project involves a significant amount of quantitative measurement and which best uses the SI metric system for those measurements.

**Senior Division Award:** Certificate.

**Junior Division Award:** Certificate.

### **U.S. Navy Office of Research**

Five awards are available. Two junior and three senior awards (no teams).

**Senior Division Award:** Certificate, medal and monetary gift.

**Junior Division Award:** Certificate and medal.

### **Yale Science and Engineering Association Inc.**

This award is given to the most outstanding 11th grade student exhibiting in the areas of Computer Science, Engineering, Physics or Chemistry (team or individual).

**Senior Division Award:** Certificate and Medallion.

*A preliminary certificate will be mailed to recipient. A pewter medallion will be sent to the winner after the Fair Director mails out the winner's form.*



# Grand Prizes

## Senior Division

### 1st Place

GCRSEF Certificate, ISEF Finalist certificate, gold medal, invitation to the ***Regeneron ISEF***, \$1000 from RPI School of Science; teams split the prize money. Year subscription to **Scientific American**.

### 2nd Place

GCRSEF Certificate, ISEF Finalist certificate, silver medal, invitation to ***Regeneron ISEF***, \$750 from RPI School of Science; teams split the prize money. Year subscription to **Scientific American**.

### 3rd Place

GCRSEF Certificate, ISEF Finalist certificate, bronze medal, invitation to ***Regeneron ISEF***, \$500 from RPI School of Science; teams split the prize money. Year subscription to **Scientific American**.

### 1st Honorable Mention:

Certificate, ribbon, invitation to ***STANYS State Science Congress***, \$250,, teams split the prize money. Year subscription to **Scientific American**.

### 2nd Honorable Mention

Certificate, ribbon, invitation to ***STANYS State Science Congress***, \$150; teams split the prize money. Year subscription to **Scientific American**.

### 3rd Honorable Mention

Certificate, ribbon, invitation to ***STANYS State Science Congress***, \$100.00; teams split the prize money. Year subscription to **Scientific American**.

## Junior Division

### 1st place

GCRSEF Certificate, Thermo Fisher Scientific JIC Certificate, gold medal, \$750 from RPI School of Science; teams split the prize money, invitation to ***STANYS State Science Congress and Invitation to Thermo Fisher Scientific Junior Innovators Challenge (JIC)***.

### 2nd Place

GCRSEF Certificate, Thermo Fisher Scientific JIC Certificate, silver medal, \$500 from RPI School of Science; teams split the prize money, invitation to ***STANYS State Science Congress and Invitation to Thermo Fisher Scientific Junior Innovators Challenge (JIC)***.

### 3rd Place

GCRSEF Certificate, Thermo Fisher Scientific JIC Certificate, bronze medal, \$250 from RPI School of Science; teams split the prize money, invitation to ***STANYS State Science Congress and Invitation to Thermo Fisher Scientific Junior Innovators Challenge (JIC)***.

### 1st Honorable Mention

GCRSEF Certificate, Thermo Fisher Scientific JIC Certificate, ribbon, \$150; teams split the prize money. Invitation to ***Thermo Fisher Scientific Junior Innovators Challenge (JIC)***.

### 2nd Honorable Mention

GCRSEF Certificate, ribbon, \$100; teams split the prize money.

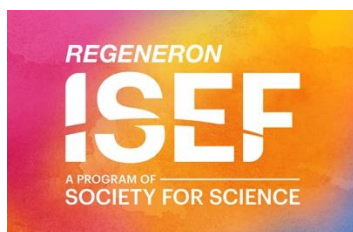
### 3rd Honorable Mention

GCRSEF Certificate, ribbon, \$75; teams split the prize money.

Our regional Regeneron ISEF may send up to three projects to the International Finals. The Planning Committee reserves the right to decide how many projects can participate in the International Finals. ISEF takes place Columbus, Ohio May 11-16, 2025.

The STANYS State Science Congress is hosted by The Milton J. Rubenstein Museum of Science & Technology (MOST) and takes place in Syracuse, NY, June 8, 2025.

Thermo Fisher Scientific Junior Innovators (JIC) online information is due June 11, 2025 by 8:00 PM EDT. Semi-finalists will be announced on September 3, 2025. Finalists will be announced on September 17, 2025. **Thermo Fisher Scientific (JIC)** national finals will be held in Washington, DC, October, 2025.



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University at Albany College of Nanotechnology, Science and Engineering  
RPI Admissions, RPI School of Science

## **Sagan (\$2500-\$3000)**

GE Aerospace Research  
GlobalFoundries  
Momentive Performance Materials  
National Grid

## **Brache (\$1000-\$2000)**

Curia Global  
SI Group  
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## **Newton's Apple (\$250-\$750)**

Eastern Branch, American Society for Microbiology (ASM)  
KAPL NOVA  
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