

Animal Science

1ST

Seth Zachary Schwartz (Commack High School)

Commack High School

The Effects of Epinephrine on Early Onset Parkinson's Disease in Drosophila melanogaster

2ND

Sarah Ariana Kruger (Roslyn High School)

Roslyn High School

Surface characterization of the cuticular scales of guard hairs in the endangered salt marsh harvest mice and the effect of cuticular scales on wettability

3RD

Azra Zirhli (Garden City High School)

Garden City High School

Comparison of Food Dyes to Caffeine on Daphnia Activity and Heart Rate.

H.M

Salvatore LoBrutto (W.C. Mephram High School)

W.C. Mephram High School

An Investigation of the External and Internal Morphology and Trabecular Structural Differences Between Medial and Lateral Fabellae in Canis Domesticus

Behavioral/Social Science

1ST

Mahiya Vira (North Shore High School)

North Shore High School

Social Misconceptions Surrounding Food Allergies

2ND

Jide Dominic Nwosu (Chaminade High School)

Chaminade High School

Gestures and Words: Exploring Memory Recall in Adults with Autism Spectrum Disorder.

3RD

Oliver Jackson Navo (Paul D. Schreiber High School), Leo Gabe Schwartz (Paul D. Schreiber High School)

Paul D. Schreiber High School

The Impact Of Artificial Intelligence on Academic Performance With Differences Among Gender and Academic Preferences

H.M

Carew Benjamin Davis (Oyster Bay High School)

Oyster Bay High School

Copper Sulfate Effecting the Lateral Line Hair Cells of Zebrafish and its Effects on Social Behavior

Cellular and Molecular Biology

1ST

Abigail Anna Thomas (Herricks High School)

Herricks High School

Visualizing the Behavior and Characterization of the Förster Resonance Energy Transfer (FRET) RhoG GTPase Biosensor

2ND

Justin Shane Zhao (Jericho High School)

Jericho High School

Molecular Architecture of Vibrio cholerae Virus Peru-2 Revealed by Cryo-EM

3RD

Sunny Mathys Kamadjeu (Jericho High School)

Jericho High School

Male Female Metabolic Differences During Acute Kidney Injury

H.M

Ming Xu (Roslyn High School)

Roslyn High School

Discovering Co-localization Patterns Between CAG110 and CLLD6 in Cellular Structures

Chemistry

1ST

Matthew Lin (Roslyn High School)

Roslyn High School

Discovery of Efficient Silica Scale Inhibitors by Utilizing Bottlebrush Polymers

2ND

Thomas Walter Mills (Connetquot High School)

Connetquot High School

Cyclic Voltammetry

3RD

Kevin Joseph Gierloff (Connetquot High School), Jaden Emerson McKay (Connetquot High School)

Connetquot High School

Detecting substances in bodily fluids using cyclic voltammetry.

Medicine and Health Services

1ST

Anchita Agrawal (Jericho High School)

Jericho High School

Novelly Classifying Nottingham Grade in Breast Cancer with Dynamic Contrast-Enhanced MRI via Convolutional Neural Networks

2ND

Jeffrey Yu (Jericho High School)

Jericho High School

Multicolor Flow Cytometry to Identify Measurable Residual Disease in Acute Myeloid Leukemia

3RD

Shan Hsieh (Syosset High School)

Syosset High School

Increased axonal bouton dynamics of horizontal projections in de-efferented cortex during rehabilitation after Spinal Cord Injury

H.M

Angelina Liu (Herricks High School)

Herricks High School

Predictability of Peridialytic Blood Pressure, Intradialytic Blood Pressure, and Weight Gain on Hypertensive Burden in Hemodialysis Patients: A Prospective Study

Environmental Science

1ST

Belen Vazquez (Manhasset High School), Krisha Wadhwa (Manhasset High School)

Manhasset High School

Algae-Powered MFCs: Optimizing Ammonium Sulfate for Energy Output

2ND

Jack Vollmer (Walt Whitman HS)

Walt Whitman HS

Effect of Microplastics on the health of buttercrunch lettuce

3RD

Li Zhang (Manhasset High School), William Pereira (Manhasset High School)

Manhasset High School

A novel investigation on the filtration of pollutants through permeable bio-pavement

H.M

Joshua Chung (Manhasset High School), Bentley Lam (Manhasset High School)

Manhasset High School

Optimization of Copper Sulfate Removal from Wastewater Using Novel Hydrogel Systems and Brassica juncea for Bioremediation

Mathematics and Computer Sciences

1ST

Henry Zhang (Jericho High School)

Jericho High School

An Exponentially Faster Quantum Hilbert Transform

2ND

Hua Lin (Roslyn High School)

Roslyn High School

Enhanced EEG-Enabled Auditory Attention Detection Using Multimodal Contrastive Learning with Graph Structures

3RD

Safiya A. Bhuiyan (Roslyn High School)

Roslyn High School

Comparative Analysis of Machine Learning Models for Prognostic Prediction in Breast Cancer Outcomes

H.M

Michaela Mallin (Roslyn High School)

Roslyn High School

Evaluating The Impact Of Segmentation on Modified ResNet-18 Based Pancreatic Ductal Adenocarcinoma in CECT Scans

Engineering and Physical Science

1ST

Emma Elise Su (Herricks High School)

Herricks High School

A Novel Decoupling Strategy for Radiofrequency Array Coils in Magnetic Resonance Imaging

2ND

John Peter Crouchley (Garden City High School)

Garden City High School

Frictionless air pressure powered flywheel

3RD

Alexander Janczyk (Cold Spring Harbor High School), Matthew Reford (Cold Spring Harbor High School)

Cold Spring Harbor High School

Piezoelectric Power: Exploring Temperature's Effect on Energy Output

H.M

Antonio James Savastano (Chaminade High School)

Chaminade High School

Novel Infrared Detector for Fuel Approximation Research Technology

Plant Sciences

1ST

Arjun Wanchoo (Manhasset High School), Nicolas Spencer Keyoung (Manhasset High School)

Manhasset High School

Exposing Alfalfa (Medicago sativa) and Ryegrass (Lolium perenne) to Various Concentrations of Motor Oil to Assess their Phytoremediation Capabilities and Effects of Motor Oil on Root Architecture and Height

2ND

Caleigh Liu (Jericho High School)

Jericho High School

Effect of Biochar on the Royal Burgundy Bean and Soil Properties

3RD

Griffin Richard Beckmann (East Hampton High School)

East Hampton High School

Examining the Impact of Beech Tree Leaf Disease on the Non-Structural Carbohydrate Storage, and Consequently, the Diameter at Breast Height (DBH), of Fagus grandifolia (American Beech).

H.M

Zhiye Liu (Babylon Junior Senior High School)

Babylon Junior Senior High School

The effect of ionic compounds on the production of voltage by Lemna minor

Behavioral/Social Science

1ST

Jessica Valerie Solomon (Paul D Schreiber High School), Evie Loewy (Paul D Schreiber High School)

Paul D Schreiber High School

What Drives Student AI Use? The Effects of Personality Traits, Grade Level, and English Language Proficiency on Academic Artificial Intelligence Use

2ND

Kate Alexandra Spieler (North Shore High School)

North Shore High School

Gut-Brain Connections in Autism: Examining Cross Group Variations in Mental Health and Socioeconomic Status

2ND

Joia Zahner (Paul D Schreiber High School), Vivienne Gilliar-Smith (Paul D Schreiber High School)

Paul D Schreiber High School

The Short Term Effects of the New York State Phone Ban on Students' Perceived Satisfaction and Bullying in Schools

3RD

Tiffany Y Zhou (Herricks High School)

Herricks High School

Bot Spotting: Identifying Cognitive Predictors of Accuracy in Distinguishing ChatGPT-Generated Faces

3RD

Erik Cunha Ravn (Chaminade High School)

Chaminade High School

Donor Commitment Signaling as an Electoral Predictor Compared to Traditional Polling Under Public Financing Policies

3RD

Rose Layla Lifland (Paul D Schreiber High School)

Paul D Schreiber High School

The New York State "Bell-To-Bell" Ban on Personal Internet Enabled Electronic Devices and Its Impact on Student Perception of Academic Performance and Socialization

H.M

Adishree Das (Herricks High School)

Herricks High School

The Impact of Word Valence, Arousal, and Mood Disorders on Memory Recall and Intrusion

H.M

Jivika Mandar Raut (Jericho High School)

Jericho High School

Effects of Optogenetic Stimulation of the BLA-DMS Pathway on Grooming in Mice

H.M

Ella Claire Graziani (Roslyn High School), Zara Cooper (Roslyn High School)

Roslyn High School

Fair or Flawed? Uncovering Hidden Biases Embedded in AI Grading

H.M

Joanna Huang (Roslyn High School), Anannya Anand (Roslyn High School)

Roslyn High School

AI as a Research Participant — Can AI Supplement Human Data?

Chemistry

1ST

Liam Patrick Connolly (Manhasset High School), Lucas Pai (Manhasset High School)

Manhasset High School

Novel L-Carnitine-Tuned Fe (II) Phenyl Oxazoline Chitosan-Supported nZVI Composite for Enhanced Visible-Light Photocatalytic Degradation of Organic Pollutants

2ND

Emma Wang (Manhasset High School), Yihan (Anna) Wang (Manhasset High School)

Manhasset High School

Employment of Microalgal Biofilms in Investigating the Application of Carrot, Raspberry, and Rosehip Seed Oils in Topical Photoprotective Agents as a Method Towards Sustainable Prevention of UV-B Radiation Derived Skin Cancers

Cellular and Molecular Biology

1ST

Regina Yejin Choi (Herricks High School)

Herricks High School

Investigating the Effects of Ret Deficiency on Gene Expression and Cellular Phenotypes in Non-Enteric Nervous System Tissues in Hirschsprung Disease

2ND

Samuel Kim (Commack High School)

Commack High School

Evaluating the Effect of Rottlerin on Muscle-Specific Dystrophin Knockdown in Drosophila melanogaster

2ND

Armaan Singh Dewal (Jericho High School)

Jericho High School

Mdivi-1 Modulation of Mitochondrial Respiratory Complex Integrity in a Fuchs Endothelial Corneal Dystrophy Model

3RD

Rehan Malhi (Herricks High School)

Herricks High School

Manganese Exposure During Early Differentiation Alters Adipocyte Maturation and Metabolic Identity.

3RD

Isabella Rosa Mueller (Herricks High School)

Herricks High School

Engineering ecDNA-Mediated MYC Amplifications in Colorectal Cancer Cells by Combining CRISPR-Cas9 Technology and Cre-loxP Systems

H.M

Ronan Michael Higgins (Walter G. O'Connell Copiague High School)

Walter G. O'Connell Copiague High School

The Antimicrobial Effects of Syzygium aromaticum Essential Oil as a Preservative Agent in Starch-Based Bioplastic Packaging for Fresh Sus domesticus Sausage Meat

H.M

Austin Qu (Herricks High School)

Herricks High School

Investigating the Nutrient Production Capacity of Mucin-Associated Gut Bacteria Using Genomic Analysis

H.M

Sohan Shah (Syosset High School)

Syosset High School

Effect of Sulforaphane and Deferoxamine on Alveolar Bleeding and Macrophage Markers in a Glycerol-Induced Premature Rabbit Model of Intraventricular Hemorrhage

Medicine and Health Services

1ST

Aanya Gupta (Jericho High School)

Jericho High School

The Effect of Erlotinib on TRPV3 Skin Ion Channels as an Inhibitor in Olmsted Syndrome.

2ND

Baran Kamil Eriskin (Commack High School)

Commack High School

The Effect of Alpha Lipoic Acid in Drosophila Melanogaster With Dilated Cardiomyopathy: A Focus on Reducing Oxidative Stress in Myocardial Cells

2ND

Joshua Lin (Manhasset High School), Daniel Shen (Manhasset High School)

Manhasset High School

Exploring the efficacy of short chain fatty acids on reducing cancer biomarkers in gut immune crosstalk-related oncogenesis in a C. elegans model

2ND

Jonah Sethna (Manhasset High School), Arjun Wanchoo (Manhasset High School)

Manhasset High School

Development of a Waste-Based Quercetin–D-Limonene Hydrogel for Anti-Biofilm Wound Treatment.

3RD

Sarah Khan (Friends Academy)

Friends Academy

Comparison of Fascicular Network Topology in Paired Human Cervical and Thoracic Vagus Nerves via Morphometric Micro-CT Analysis

3RD

Brianna Tam (Herricks High School)

Herricks High School

Investigating the Changes in Water Compartmentalization in Epilepsy Associated With Inflammation Using NODDI and SANDI Diffusion Models

3RD

Vanessa Theodos (Roslyn High School), Patrick Hermosura (Roslyn High School)

Roslyn High School

Using ResNet-18 to Detect the Three Major Blood Cancers: Leukemia, Lymphoma, and Myeloma

3RD

Grace Li (Jericho High School)

Jericho High School

Comparative Antibiofilm Activity of Manogepix and Micafungin Against Clinically Relevant Candida Species

H.M

Elivia Choong Yi Choong (Manhasset High School), Talie Lin (Manhasset High School)

Manhasset High School

Ecotoxicological effects of polyethylene microplastics on the growth, regeneration, and behavior of Dugesia tigrina

H.M

Prisha Chadha (Commack High School)

Commack High School

Identifying a Correlation of Non-Coding MicroRna Gene Expression Between Oral Cavity Squamous Cell Carcinoma and Colorectal Cancer

H.M

Terrence Wang (The Stony Brook School)

The Stony Brook School

A Brain-Computer Interface Soft Exoskeleton for Gamified and Adaptive Upper-Limb Post-Stroke Rehabilitation

H.M

Kayla Margaret Straker (Seaford High School)

Seaford High School

The Effect of Eugenol on the Short-and-Long Term Memory of Planaria (Dugesia dorotocephala)

Environmental Science

1ST

Nicolas Spencer Keyoung (Manhasset High School)

Manhasset High School

Solar-Activated TiO₂-Biochar Smart Filter for Predictive Water Filtration

2ND

Emma Jiayun Yan (Plainview-Old Bethpage JFK High School), Sanjana Kunam (Plainview-Old Bethpage JFK High School), Manjot Kaur Tamber (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

Alkaline Pretreatment and Enzyme Synergy for Effects on Surface Erosion and Tensile Strength Reduction in PLA Filaments

2ND

Isabella Elyse Conzo (St Anthony's High School)

St Anthony's High School

The Digestion of Microplastics in G. sigillatus (banded cricket)

3RD

Charles Qin (Syosset High School)

Syosset High School

Enhancing Enzyme Reusability: Immobilization of Lipase for PLA Degradation Using Calcium Alginate and Biochar

3RD

Celia Jaye Platt (Paul D Schreiber High School)

Paul D Schreiber High School

The Effect of Changing Sea Depths and Fault Slip on Tsunami Velocity, Strength, and Future Predictability

H.M

Belén Maria Vázquez (Manhasset High School), Krisha Henna Wadhwa (Manhasset High School)

Manhasset High School

Investigating the Potential of Algae-Derived Hydrogen from Microplastic-induced Oxidative Stress Combated by Antioxidants for PEM Fuel Cells

H.M

Olivia Hang (Friends Academy), Christina Yin (Friends Academy), Jaya Gambhir (Friends Academy)

Friends Academy

Determining Quantities of Microplastics in 25 Home Tap Water Samples Throughout Long Island and New York City and Testing a Novel Solution

H.M

Aashrita Koyi (Jericho High School)

Jericho High School

Investigating Earth Orientation Parameters as Predictors of Global Temperature Anomalies

Mathematics and Computer Sciences

1ST

Cameron Blake Alevy (Paul D Schreiber High School)

Paul D Schreiber High School

Computational Identification of Novel Regulators of Klotho, SIRT1, and Nrf2 Using Graph Neural Networks

2ND

Matthew Calle (East Hampton High School)

East Hampton High School

Multi-layer Perceptron and Graph Neural Networks for the accurate prediction of Molecular Properties

3RD

Juan Felipe Torres (East Hampton High School)

East Hampton High School

Effects of multi-Acousto-Optic Deflectors (AOD) on Circuit's Compilation Runtime and Fidelity in Neutral Atom Quantum Circuits that use the Zoned Quantum Architecture Compiler (ZAC).

H.M

Jonah Rolnick (Lynbrook Senior High School)

Lynbrook Senior High School

Development of an Electromyography Tracked Virtual Reality Glove with Electric Muscle Stimulation Haptics

H.M

Michael Zvi Bank (The Wheatley School)

The Wheatley School

The Investor Emotional Volatility Index (IEVI)

Engineering and Physical Science

1ST

Naya Gilja Shah (Manhasset High School), Katelynn Cai (Manhasset High School)

Manhasset High School

Building a Low-Cost, Paper-Based Sensor for On-Site Detection of Microplastics via Molecular Imprinting and Fluorescent Dye Response using the Natural Biopolymer Cellulose

2ND

Sara Suba Shikder (North Shore High School)

North Shore High School

Construction of a GHz-modulated injection-locked laser

3RD

Aidan Kai Lee (Friends Academy)

Friends Academy

Early Failure Prediction in Hydraulic Systems Using Machine Learning Long-Short Term Memory Networks and Multisensor Time-Series Data

3RD

Jack Thomas Laurinavicius (St Anthony's High School)

St Anthony's High School

Observing the Electrical Behavior of a YBCO Superconductor Above and Below its Electrical Capacity

H.M

Jolyna Weng (Jericho High School)

Jericho High School

Optimization of PAA, CS, and Gel Concentrations for Hydrogel Synthesis

H.M

Sara Yu (Jericho High School)

Jericho High School

Assessing Spatial Fidelity Using Fuzzy Ripple Free Functional MRI: An Analysis of Cortical Layers.

Plant Sciences

1ST

Bentley Lam (Manhasset High School)

Manhasset High School

Optimizing Hydrogels as Amendments and for the Control of Invasive Ant Species

2ND

Alessa Picco (East Hampton High School)

East Hampton High School

Conditions that affect the Properties of Nanoparticles

3RD

Rosina Marie Wickham (Walter G. O'Connell Copiague High School)

Walter G. O'Connell Copiague High School

The Effect of Microplastics on the Photosynthetic Properties of Medicago sativa via Aquatic Exposure at Various Time Increments During Growth

H.M

Asher Jacob Abir (Lynbrook Senior High School)

Lynbrook Senior High School

The Effects of Rhizobium Inoculation and Red Worm Activity on Vigna Radiata Growth in Lunar Regolith Simulant