

Animal Sciences

1ST

Alexandra Claire D'Alessio (Half Hollow Hills West)

Half Hollow Hills West

The Adverse Effects of Hunting on the Length of Bellows of American and Canadian Bison During Rut

2ND

Nicholas Borruso (Westhampton Beach High School)

Westhampton Beach High School

Assessment of the Behavioral Impacts of PFAS on Danio rerio

2ND

Jack Ryan Levitt (John F. Kennedy High School)

John F. Kennedy High School

The Supplementation of Probiotics via Yogurt Ameliorates Parkinson's Disease Phenotypes in a Drosophila melanogaster Model

3RD

Ishana Chadha (Commack High School)

Commack High School

The Role of Oligophrenin1 and Pacsin2 in Modulating Radial Migration of Pyramidal Neurons During Brain Development

3RD

Evelyn Taylor Caputo (Wantagh High School)

Wantagh High School

A Survival Analysis into the Interactions between Cardenolide-Toxic Milkweed and the Invasive Spotted Lanternfly

H.M

Emilia Marie Miranda (West Islip High School)

West Islip High School

Analyzing Microplastic Quantity and Chemical Composition in Farm-Raised vs Wild-Caught Shrimp for Human Consumption Using Infrared Spectroscopy

H.M

Emaan Tehseen (Elmont Memorial)

Elmont Memorial

Genetic interactions characterizing gene functions downstream of oncogenic GNAQ signaling in Uveal Melanoma using Drosophila melanogaster

H.M

Jasmine Liu (Syosset High School)

Syosset High School

Analysis of the Flavonoid Corylin's Impact on Aging in C. elegans

Behavioral and Social Sciences

1ST

Chloe Yerin Lee (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

Exploring the Effects of Cannabidiol-Medium Chain Triglyceride Oil on Locomotion and Tap Withdrawal Response Using Caenorhabditis elegans as a Model for Alzheimer's Disease?

2ND

Joshua Marc Kleyner (Syosset High School)

Syosset High School

Neural Correlates During Human-Canine Face to Face Interactions

2ND

Michael Benjamin Lyakhov (John L. Miller Great Neck North High School)

John L. Miller Great Neck North High School

Predicting Schizophrenia via Cognitive Biomarkers: Development of a Machine Learning Algorithm for Early Diagnosis and Accessible Care

2ND

Grace Chenxin Liu (Syosset High School)

Syosset High School

Evaluating Gender Disparities Due to Decision-Making Under Uncertainty in Entrepreneurship: A Panel Data Analysis

2ND

Sadelle Gelman Poulsen (Paul D. Schreiber High School)

Paul D. Schreiber High School

Exploring the Content Themes and Engagement Strategies Employed by First-Time Voters on TikTok

3RD

Nyra Steffini Mehra (Paul D. Schreiber High School)

Paul D. Schreiber High School

Bilingualism, Executive Functions, and COVID-19

3RD

Sarah Nicole Fernbach (Roslyn High School)

Roslyn High School

Relationships Between Racial Socialization, Endorsement of a Racial Colorblind Ideology, and Perceptions of Race-Based Microaggressions Among Young Adults

3RD

Gabriella Elliott (John F. Kennedy High School)

John F. Kennedy High School

The Use of Diagnostic Coding Processes in the Analysis of Verbal Behaviors to Enhance Patient-Provider Connection

H.M

Brice Chiu (New Hyde Park Memorial High School), Harmehar Kaur (Syosset High School)

New Hyde Park Memorial High School

Investigating the Impact of Social Connectivity on Self-Reported Cardiovascular, Cognitive, and Mental Health: A Survey-Based Study

H.M

Ava Ramsey (Roslyn High School)

Roslyn High School

Clever or Conceited? Investigating the Effects of Gender and Self-Promotion on Perceptions of a Potential Employee

H.M

Saswati Bhattacharya (Commack High School)

Commack High School

The Impact of Social Media on the Glorification of Mental Illness Across Age Groups

H.M

Aleeza Dhillon (Valley Stream North High School)

Valley Stream North High School

Investigating the Impact of the Big 5 Personality Traits on Teacher Burnout and Job Satisfaction Among High School Educators

H.M

Garrett Greenberg (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

A Novel Application of Machine Learning to Detect Indicators of Student Depression As a Tool for the Multi-tiered Systems of Support

Biochemistry

1ST

Natalie Osorio (H. Frank Carey)

H. Frank Carey

Biophysical Investigations Into the Structure and Function of Pseudomonas aeruginosa Nitric Oxide Signaling System

2ND

Kevin Liu (Jericho High School)

Jericho High School

Querying the Functional Properties of GEM Mutants Using in vitro FRET and NanoBiT Assays: Implications in Glucose Metabolism Disorders

3RD

Ashka Shah (Jericho High School)

Jericho High School

Regulating Cancerous Hyperactive Wnt Signalling Through a Novel GID8 Mechanism in Drosophila and Human Embryonic Kidney Cells

H.M

Alex Matthew Silbert (Eastport South Manor Junior-Senior High School), Logan Jack Silbert (Eastport South Manor Junior-Senior High School), William Steinacher (Eastport South Manor Junior-Senior High School)

Eastport South Manor Junior-Senior High School

Ballistic Barrage Against Beta Lactamases

H.M

Gabrielle Victoria DeCapua (Connetquot High School), Michael Benedict Fabbri (Connetquot High School)

Connetquot High School

Biomolecular Dynamics of Perfluoroalkyl Pollutants in Complex with Bovine Serum Albumin

Biomedical and Health Sciences

1ST

Sophia Antonina Tarasenko (Jericho High School)

Jericho High School

Effects of Vitamin D Metabolites and Vitamin K2 on Menstrual Effluent-Derived Endometrial Stromal Cell Viability and Decidualization

2ND

Leah Manshu Dong (Paul D. Schreiber High School)

Paul D. Schreiber High School

The Role of Fe-S Cluster Biosynthesis in the Regulation of Fe-S Proteins, Fe-Metabolism, and Downstream Stress Responses In-Vivo

2ND

Aryana Adur (Jericho High School)

Jericho High School

Larazotide Acetate as a Novel Approach to Mitigate Food Allergy-Induced Intestinal Epithelial Cell Lining Damage

3RD

Grace Rose Nolan (St Anthony's High School)

St Anthony's High School

Cell-Type Contributions of the Myrf-1 Gene to Development in Caenorhabditis Elegans

3RD

Ashna Muni (Herricks High School)

Herricks High School

Asymptomatic Intracranial Hemorrhages Correlate with Poor Patient Outcomes and NIHSS Predictivity: A Retrospective Analysis of Post-Thrombectomy Ischemic Stroke Patients

3RD

Abigail Kavinal Rajan (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

A Novel Link Between Chemotherapy-Induced Ryanodine Receptor 2 (RyR2) Dysfunction and Alzheimer's Disease Pathology

H.M

Emily Maria Podolska (West Islip High School)

West Islip High School

Evaluating Herbal Supplements through Mineral Content and DNA Analysis

H.M

Paul Santy (Syosset High School)

Syosset High School

The Effect of Semaglutide Acetate on Lifespan and Reproductive Capacity in Caenorhabditis elegans

H.M

Ryan Matthew Deegan (West Islip High School), Isabella Rose Tussie (West Islip High School)

West Islip High School

Analyzing C. elegans as a Cancer Model using Infrared Microspectroscopy

Biomedical Engineering

1ST

Sandeep Sawhney (Herricks High School)

Herricks High School

Gallium Mediated DNA Tensegrity Triangle Based Crystals: A Novel Prototype Facilitating Gallium Cancer Therapy

2ND

Parshwa Shah (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

A Novel Unobtrusive Silent Speech Recognizer for Patients Suffering From Voice Disorders Using Machine Learning

3RD

Hallie Lee (Herricks High School)

Herricks High School

A Novel Evaluation of Transcatheter Mitral Balloon Valvuloplasty Preprocedural Analysis in Rheumatic Stenosed Patients Broadens Eligibility Through Cardiac Imaging

H.M

Sara Shamail (Garden City High School)

Garden City High School

Development of an Innovative Hydroxyapatite-Agarose Hydrogel Grid to Enhance Bone Stabilization and Regeneration

H.M

Claudia Modica (Kings Park High School)

Kings Park High School

A Comparative Analysis of the Effects of Low Intensity Vibrations on the Tibial and Femoral Properties of a Duchenne Muscular Dystrophy Mouse Model

Cellular and Molecular Biology

1ST

Daanish Bassi (Smithtown High School East)

Smithtown High School East

Assessing Novel RIPK2-MKK7 Interaction Inhibitors in Prostate Cancer Cell Lines

2ND

Lilly Sarah Horowitz (Jericho High School)

Jericho High School

The Effect of Histone Modifications Induced by Ack sRNAs on Ac Transposable Elements

3RD

Aafia Ahmed (Elmont Memorial)

Elmont Memorial

The antioxidant role of JAK2/STAT3 signaling pathway against methylmercury-induced toxicity in a mouse astrocyte neuronal C8-D1A cell line

H.M

Alicia Imani Madjido (Half Hollow Hills East)

Half Hollow Hills East

Conditional elimination of a centriolar protein exhibits stage-specific cell cycle arrest in mouse embryonic fibroblasts.

H.M

Serena J Chen (Herricks High School)

Herricks High School

The Novel Involvement of Peroxisomal Beta-Oxidation During Mitochondrial Inhibition in Catecholamine-Stimulated Acyl-Coenzyme A Oxidase 1 (ACOX1) Knockout White Adipocytes

Chemistry and Material Science

1ST

Lucienne Keyoung (Manhasset High School), Isabel Rose Gonzalez (Manhasset High School)

Manhasset High School

Ag-TiO₂@HNT Nanotubes for Highly Efficient and Eco-Friendly Organic Pollutant Degradation

2ND

Emily Rose Smukler (George W. Hewlett High School)

George W. Hewlett High School

Aptamer-Mediated Biosensing using Self-Assembled DNA Nanomaterials

3RD

Serin Jo (Roslyn High School)

Roslyn High School

Characterization of Novel Amyloid- β ; Peptide Coacervate Release Kinetics and Drug Loading for Doxorubicin

H.M

Richard Chai (Smithtown High School East)

Smithtown High School East

Optimizing the Nitro-Oxidation Process to Convert Lignocellulosic Waste into Fertilizers and Nanocellulosic Materials

H.M

Julang Wang (Friends Academy)

Friends Academy

Magneto-optical effects induced by chiral lattice vibrations in two-dimensional materials

H.M

Liza Sophie Zelkin (Commack High School)

Commack High School

The Antimicrobial Effects of Uniquely Coated Sutures on Staphylococcus epidermidis

Computational Biology and Bioinformatics

1ST

Erin Wong (William A. Shine Great Neck South High School)

William A. Shine Great Neck South High School

StAIR: Stepwise All-Atom Iterative Reconstruction of Large Coarse-Grained Protein Structures

2ND

Melody Heeju Hong (General Douglas MacArthur High School)

General Douglas MacArthur High School

A Bayesian Exploration Into More Flexible trans-Methylation Quantitative Trait Locus Mapping

3RD

Tessla Chan (Roslyn High School)

Roslyn High School

Investigating Synthetic Lethality as a Novel Treatment for 9p21.3 Deletion and MSI-H cancers

H.M

Nicholas Tumelty (Waldorf School of Garden City)

Waldorf School of Garden City

Improving kNN: Downsampling & Bootstrapping

H.M

Evan Matthew Kolberg (John F. Kennedy High School)

John F. Kennedy High School

Identification of Excitatory and Inhibitory E18 Neurons for Frequency Regulation of Network Activity via HD-MEAs

Earth and Environmental Sciences

1ST

Winston Zhou (Syosset High School)

Syosset High School

Wavelet Based Parallel Hybrid Deep Learning Model for Forecasting El Nino-Southern Oscillation Cycles

1ST

Taylor Maguire (Garden City High School)

Garden City High School

Evaluating the Long Range UVA Blocking Abilities of an Eco-Friendly Sunscreen Substitute Derived From Musa acuminata on Girardia tigrina Locomotion and the Degree of UV-Induced Cellular Damage.

2ND

Emily Zhao (Manhasset High School)

Manhasset High School

Integrated Geospatial and Socioeconomic Analysis Forecasting Food Insecurity Under Climate Change

2ND

Samantha Ruano Leon (East Hampton High School)

East Hampton High School

Comparison of Microplastic Abundance and Composition Between Bivalves: Geukensia demissa, Mytilus edulis, Mercenaria mercenaria, Crassostrea virginica, and Argopecten irradians

2ND

Tyler Michael Matukonis (Ward Melville High School)

Ward Melville High School

Predictive Modeling of Vibrio Spp. Planktonic Growth and Biofilm Formation Under Environmental Stressors Using Machine Learning

3RD

Kahela Jade Michel (Elmont Memorial)

Elmont Memorial

Coral Geochemistry Reconstruction Predicts South Pacific Convergence Zone Dynamics in a Changing Climate

3RD

Zohia Tahir (Brentwood High School)

Brentwood High School

Assessing and Evaluating the Effects of Various Plastic Pollutants on Geukensia demissa Filtration Efficiency: An Investigation into Marine Pollution and Its Ecological Consequences

3RD

Elizabeth Cruz (Brentwood High School)

Brentwood High School

Evaluating Microfiber Emission from Domestic Laundering and Their Effects on the Filtration Rate of Geukensia demissa

H.M

Noah Ryan Berlin (Half Hollow Hills East)

Half Hollow Hills East

Evaluating the Relative Importance of the Causes of Hypoxia in the Eastern and Western Narrows Regions of the Long Island Sound

H.M

Michelle E Leal (Brentwood High School)

Brentwood High School

Evaluating the Effects of Ocean Acidification on Argopecten Irradians Using Advanced Analytical Techniques and Shell Morphology

H.M

Graelyn Mar LoRusso (Westhampton Beach High School)

Westhampton Beach High School

The Effects of Sunscreen Chemical Avobenzone in Seawater on the Development and Mortality of Juvenile M. mercenaria Shellfish

H.M

Taylor Madison Carpentieri (Sayville High School), Adria Marina Vargas (Sayville High School)

Sayville High School

Testing the Efficacy of Biofiltration Media for Stormwater Nitrate Filtration and Reduction

Energy and Environmental Engineering

1ST

Alexandra Eileen Gregory (Garden City High School)

Garden City High School

Novel Magnetic Device for Microplastic Capture via Van Der Waals Forces

2ND

Kate H Adams (Walt Whitman High School)

Walt Whitman High School

The Development of a Low-Cost Lycorma Delicatula Trap

3RD

Samantha Liu Stoneking (Manhasset High School), Kristina Theodosopoulos (Manhasset High School)

Manhasset High School

Enhancing Dye-Sensitized Solar Cell Performance: The Role of Gelled Electrolytes and Natural Dye Co-Sensitization

H.M

Ryan Tae (Jericho High School)

Jericho High School

Optimizing Silicon Anodes: Investigating Ultra-High Carboxyl Density Binders

H.M

Sophie Hu (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

Cost-efficient catalysis: Scaling and characterization of the SSZ-13 (CHA) zeolite synthesis process

Embedded, Technology Arts, Technology Engineering, and Energy Technology

1ST

Alexander Thomas Singer (Ward Melville High School)

Ward Melville High School

Novel CMOS Level Shifting Topologies for Signal Transmission Between Chiplelets of Different Voltages

2ND

Bryan Cheng (William A. Shine Great Neck South High School), Yuhao (Henry) Xu (William A. Shine Great Neck South High School)

William A. Shine Great Neck South High School

Adaptive Optics Beam Steering System Utilizing Nematic Liquid Crystal & Machine-Learning Predictive Correction for Enhancing Fso Systems

3RD

Abdullah Ahmed Ashrafi (George W. Hewlett High School)

George W. Hewlett High School

Development of a Thermal Camera for Imaging Using Terahertz Radiation

H.M

Noah Reid Kay (Half Hollow Hills East), Adithya Patnam (Herricks High School)

Half Hollow Hills East

Adaptive Haptic Feedback Device for Observing the Delivery of Information in Time-Critical Human-Machine Interfaces

H.M

Sean Matthew Skinner (Ward Melville High School)

Ward Melville High School

Physics-Informed Machine Learning for Many-Objective Generative Design

H.M

Daniel Sawicki (St Anthony's High School)

St Anthony's High School

Waterless technology to clean dust from photovoltaic cells using additive manufacturing of Indium Tin Oxide Electrodes

Microbiology

1ST

Mehek Kaur Sawhney (Commack High School)

Commack High School

Characterizing the Secretion Signal in the C-Terminus of the Francisella tularensis protein FTL_1123: Insights for Type 1 Secretion and Therapeutics

2ND

Cody Cheng (Syosset High School)

Syosset High School

An analysis of truncated Sgs1 protein interactions with Mek1, Srs2, and Zip1 using the two-hybrid system in budding yeast

3RD

Caitlin Avery Lee (Herricks High School)

Herricks High School

In vitro Analysis of SARS-CoV-2 Omicron JN.1 Subvariants with Spike S31 Deletion and Their Evasion of COVID-19 Therapies

H.M

Alyssa Shuchen Huang (Syosset High School)

Syosset High School

Assessment of wastewater exposure and horseradish peroxidase on the removal of bisphenol A by Chlorella vulgaris

H.M

Maroska Ishak (Walt Whitman High School), Elizabeth Hsiao (Roslyn High School), Claire Parks (Huntington High School)

Walt Whitman High School

The Effect of Glyphosate on Plant and Microbial Health

Physics and Astronomy

1ST

Gary Han (Syosset High School)

Syosset High School

Discovery of the First Double Exocomet Using an Automated Deep Learning Convolutional Neural Network

2ND

Vivian Chen (Manhasset High School)

Manhasset High School

Probing Electron Spin Using Optically Detected Magnetic Resonance

3RD

Mia Cavero (Sanford H. Calhoun)

Sanford H. Calhoun

Calibration of a Laboratory Version of the NASA Mars 2020 Perseverance Rover PIXL micro-XRF Instrument

H.M

Tiffany Chung (Smithtown High School East)

Smithtown High School East

Methods of Surfactant Purification for Large-Scale Water-based Liquid Scintillator Neutrino Detection

H.M

Zen Pinkenburg (Rocky Point HS), Om Patel (Rocky Point HS)

Rocky Point HS

Plant Sciences

1ST

Dora Fields (Northport High School)

Northport High School

Effects of Nitrogen-Doped Carbon Dots on Germination and Growth in Solanum lycopersicum (tomatoes) Using Keratin-Based Hydroponic Substrates

2ND

Ariel Sofia Greenberg (George W. Hewlett High School)

George W. Hewlett High School

Identification and Characterization of a Mutant Tolerant to Na⁺ and Ag⁺ in Fern Ceratopteris richardii

3RD

Kevin John Tritschler (Valley Stream South High School)

Valley Stream South High School

Natural Pesticides: Assessing the Influence of Salinity Stress and Mitigation via B. Subtilis Application on the Development of Lamiaceae Botanicals and their Impact on the Natural Predator H. convergens

H.M

Mark Prainito (John F. Kennedy High School)

John F. Kennedy High School

A Novel Evaluation of the Efficacy of Ulva spp. in Mitigating Ocean Acidification and Cochlodinium polykrikoides Toxicity in Mercenaria mercenaria and Crassostrea virginica Larvae

H.M

Cassel Claire Koss (Long Beach High School)

Long Beach High School

Utilization of Bacillus megaterium and Pseudomonas fluorescens to Substitute Fertilizer Usage in the Hydroponic Cultivation of Lactuca Sativa

Robotics, Intelligent Machine, Software, and Math

1ST

Arav Chand (Half Hollow Hills West)

Half Hollow Hills West

Matrix Product Formulas for Generating Functions for p -adic Valuations of Generalized Binomial Coefficients

2ND

Partap Singh Sidhu (Bethpage High School)

Bethpage High School

Low-Cost, High-Performance Humanoid Upper Body for Automating Hazardous Tasks with Quasi-Direct Drive Actuators and Machine Learning

2ND

Michael Petrizzo (Commack High School)

Commack High School

Building a Conversational AI Medium to Enhance Psychotherapy Training with Virtual Patients

3RD

Anish Pahari (Jericho High School)

Jericho High School

High-Rank Elliptic Curve Generation: A Novel Algorithm with Cryptographic Applications

3RD

Mohammad Wasim (Half Hollow Hills East)

Half Hollow Hills East

Optimizing Quantum Support Vector Classifiers in Flood Prediction: Data Specific Quantum Kernel Training for Enhanced Feature Mapping Capabilities

H.M

Alexandra Lindsay Miller (Paul D. Schreiber High School)

Paul D. Schreiber High School

Enhancing Policy Learning in Autonomous Robots through Multi-Perspective Visual Data Inputs via Imitation Learning

H.M

Samvath Karanam (Hauppauge High School)

Hauppauge High School

Ear-ly Detection: A Machine Learning Approach to Identification of Ear Infections

H.M

Dean Chen (Paul D. Schreiber High School)

Paul D. Schreiber High School

Improving the Precipitation Distribution Around Synthetic Tropical Cyclone Tracks Using Radar, P-CLIPED Precipitation Model, and Deep Learning

Translational Medical Science

1ST

Caden Li (William A. Shine Great Neck South High School)

William A. Shine Great Neck South High School

Automated Segmentation and Characterization of Hemorrhagic Cysts in Autosomal-Dominant Polycystic Kidney Disease: A Comparative Study of PKD1 and PKD2 Genotypes

2ND

Mahin Ryan Gupta (Roslyn High School)

Roslyn High School

Evaluating Readability Metrics in AI-Summarized Versus Standard Patient Education Materials: A Quantitative Analysis

3RD

Ariel River (George W. Hewlett High School)

George W. Hewlett High School

Characterizing miRNA Associated With Gastroesophageal Reflux Disease

H.M

Misha Gujja (Jericho High School)

Jericho High School

Spatial Transcriptomic Analysis of Human Dopaminergic Neurons and Breast Cancer Cells Co-cultured In Vitro: Implications for Perineural Invasion

H.M

Emma Wen (John L. Miller Great Neck North High School)

John L. Miller Great Neck North High School

AUM-302, A Novel Triple PIM/PI3K/mTOR Inhibitor, Offers Promising Potential in Reducing the Growth of Pancreatic Ductal Adenocarcinoma Spheroids and Organoids

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. Mepham 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

1ST

William Morin (Lloyd Harbor School), Kaden Weber (Lloyd Harbor School), Anthony Sierecki Sierecki (Lloyd Harbor School)

Lloyd Harbor School

Examination of the efficiency of perovskite vs silicon solar cells at varying temperatures

1ST

Jada Lin (Great Neck South Middle School)

Great Neck South Middle School

The Effect of Natural Inhibitors on Preventing Conjugation in Ampicillin Resistant E. Coli

1ST

Juniper Lee (Great Neck South Middle School), Selena Long (Great Neck South Middle School), Sabrina Sang (Great Neck South Middle School)

Great Neck South Middle School

Academic Integrity and the Connection Between Morning and Afternoon Class Sections

1ST

Nathan Li (Great Neck South Middle School), Ryan Tsai (Great Neck South Middle School), Kyle Zheng (Great Neck South Middle School)

Great Neck South Middle School

Shining a Light on Enclosed Ecosystems: How does a temperature increase of 1.5°C impact an ecosystem?

1ST

Isabelle Yang (Great Neck South Middle School), Caitlin Chan (Great Neck South Middle School), Victoria Huang (Great Neck South Middle School)

Great Neck South Middle School

Are plant-based cleaners as effective as traditional cleaners?

1ST

Hailey Au (Great Neck South Middle School), Natalie Wu (Great Neck South Middle School), Tonya Zhu (Great Neck South Middle School)

Great Neck South Middle School

Turning the Tide: The Future of Irrigation Through Desalination

1ST

Isabella Rufrano (Copiague Middle School)

Copiague Middle School

Here Comes the Bloom

1ST

Lenna Karwowska (Copiague Middle School)

Copiague Middle School

The Race of the Bioplastics

1ST

Mihir Sathish Kumar (Hauppauge Middle School)

Hauppauge Middle School

Future in Every Drop: Harvesting Blue Energy from Rainwater

1ST

Vaibhavi Hegde (Hauppauge Middle School)

Hauppauge Middle School

Eco-Friendly Hydrogels: A Sustainable Solution for Water Conservation in Farming

2ND

Sean Dietrich (Grand Avenue Middle School)

Grand Avenue Middle School

Does depth or origin have a greater impact on farmed oyster growth?

2ND

Rayan Ahmad (Woodland Middle School), Joslin Shenouda (Woodland Middle School), Avery White (Woodland Middle School)

Woodland Middle School

What is the effect of cutting board material on the growth rate of bacteria?

2ND

Iris Chen (Woodland Middle School), Rachel Galo (Woodland Middle School), Arielle Winters (Woodland Middle School)

Woodland Middle School

What is the effect of the 5 second rule on the growth of bacteria?

2ND

Emilia Syvertsen (Kellenberg Memorial High School)

Kellenberg Memorial High School

Unlocking the secrets of diabetes medicine: How our genes make a difference?

2ND

Alex Zamerky (Mineola), Dylan Kaufman (Mineola), Michael Gaylor (Mineola)

Mineola

The Effect of Acute Exposure of 2mg Nicotine on the Segment Regeneration in Lumbriculus Variegatus

2ND

Hanlei Chen (Richard S. Sherman - Great Neck North Middle School), Brian Liu (Richard S. Sherman - Great Neck North Middle School), Jayden Wen (Richard S. Sherman - Great Neck North Middle School)

Richard S. Sherman - Great Neck North Middle School

CyanoScience: Tackling the Toxins of Today, Terminating the Toxins of Tomorrow

2ND

Kevin Livian (Richard S. Sherman - Great Neck North Middle School), Jayden Leung (Richard S. Sherman - Great Neck North Middle School)

Richard S. Sherman - Great Neck North Middle School

The Force of a Budget

2ND

Justin Qu (Great Neck South Middle School), Everett Zhou (Great Neck South Middle School), Peyton He (Great Neck South Middle School)

Great Neck South Middle School

Can People Differentiate Between Real and AI-Generated Images?

2ND

Emilio Reyes (Copiague Middle School)

Copiague Middle School

Sports Drink Showdown

2ND

Nicolette Orlando (Copiague Middle School)

Copiague Middle School

UV Rays: Lotion vs. Sprays

3RD

Julia Mordoff (Grand Avenue Middle School), Safana Merhai (Grand Avenue Middle School)

Grand Avenue Middle School

Which plant nutrient, nitrogen versus phosphorus, works to produce the best growth in Brassica var. sabellica measured by height, final mass, root depth, root strength, and leaf color?

3RD

Darsh Singla (Grand Avenue Middle School)

Grand Avenue Middle School

What are the effects of toxic soil from the Grumman Spill on pea plant germination, development, and growth?

3RD

Courtney Holinski (Woodland Middle School), Cassandra Snow (Woodland Middle School), Allison Kim (Woodland Middle School)

Woodland Middle School

What is the effect of surface area and material on the terminal velocity on a falling object?

3RD

Jahane Abidi (W. Tresper Clarke Middle School), Naomi David (W. Tresper Clarke Middle School), Emilia Geo (W. Tresper Clarke Middle School)

W. Tresper Clarke Middle School

The Effect of Different Colored Roofs on their Heat Absorbtion

3RD

Rex Rastegar (Richard S. Sherman - Great Neck North Middle School), Shaya Haghani (Richard S. Sherman - Great Neck North Middle School)

Richard S. Sherman - Great Neck North Middle School

Annihilate That Acne!

3RD

Atharv Dhawan (Great Neck South Middle School), Leeann Lee (Great Neck South Middle School), Zoe Li (Great Neck South Middle School)

Great Neck South Middle School

STAHZAI: Can artificial intelligence accurately predict the habitable zone of a star?

3RD

Emma Frulio (Howard T. Herber Middle School), Raven Goddard (Howard T. Herber Middle School)

Howard T. Herber Middle School

Investigating the Efficacy of Sunscreens: Mineral vs Chemical

3RD

Mya Nunez (Copiague Middle School)

Copiague Middle School

Different Compost, Different Results

3RD

Zoe Nobel (Oyster Bay High School)

Oyster Bay High School

Light Pollution in Oyster Bay

3RD

Ishaan Maheshkumar (Hauppauge Middle School)

Hauppauge Middle School

Eco-Safe and Strong Concrete

H.M

Graham Davis (Friends Academy), Matt Hudak (Friends Academy)

Friends Academy

Exploring the Use of Oyster Mushrooms for the Uptake of Toxins in Pre-runoff Water to Prevent Chemicals from Entering Oyster Bay

H.M

Elaine Zheng (Grand Avenue Middle School), Billie Gazsy (Grand Avenue Middle School)

Grand Avenue Middle School

*What is the effect of temperature on the tunneling habits, measured in speed, of red harvester ants (*P. barbatus*)?*

H.M

Kenneth Kim (Woodland Middle School), Mark LaBarge (Woodland Middle School), Jonathan Persaud (Woodland Middle School)

Woodland Middle School

What is the effect of surface area on the flight path of an airplane?

H.M

Ariana Chinchilla (Howard T. Herber Middle School), Shenieka Grant (Howard T. Herber Middle School), Minnie Joa Feng (Howard T. Herber Middle School)

Howard T. Herber Middle School

The Impact of Density on Conduction in Metals

H.M

Ella Kelch (Howard T. Herber Middle School), Olivia Van De Ven (Howard T. Herber Middle School)

Howard T. Herber Middle School

The Impact of Electricity on the pH of Electrochemical Cells

H.M

Chloe Shen (Locust Valley Middle School), Alexandra Khrikheli (Locust Valley Middle School)

Locust Valley Middle School

*Kirby Bauer antibiotic susceptibility test of Tetracycline over multiple generation using *E.Coli* as a model*

H.M

Rebecca Molina (Copiague Middle School)

Copiague Middle School

Catching Fire

H.M

Aiden Napolitano (Hauppauge Middle School)

Hauppauge Middle School

The Effects of Aging on Reaction Time

H.M

Aditri Arun (Hauppauge Middle School)

Hauppauge Middle School

Slow Release Fertilizer vs. Fast Release Fertilizer

H.M

Caitlin Sweeney (East Woods School), Jackson Kennedy (East Woods School)

East Woods School

Next Generation Calcium Alginate Bandages Versus Traditional Bandages