Bethpage High School

H.M
Zoe Naree Chinda (Bethpage High School)
Microbiology and Biochemistry
Evaluating the Effects of Plasmid Copy Number and Size on Bacterial Host Cell Fitness

Brentwood High School

H.M
Stephanie Pizano (Brentwood High School)
Earth and Environment with Environmental Engineering
The Development and Assessment of Anionic Resins for the Use in Mitigating Nitrogen in Sewage Drains and Agricultural Runoff

Carle Place High School

H.M
Jonathan Zhu (Carle Place High School)
Translational Medical Science
??Exploring the Potential Synergistic Antitumor Effect of L-Se-Methylselenocysteine and Sulforaphane on Human Cancer Cell Lines

Cold Spring Harbor High School

1ST
Milan Lustig (Cold Spring Harbor High School)
Robotics, Intelligent Machines and Software
A Configurable Compiled Programming Language With Integrated Transpilation

H.M

Zabelle Bobelian (Cold Spring Harbor High School)

Robotics, Intelligent Machines and Software

Deep Neural Nets for Imaging Systems

Commack High School

1ST

Mehek Kaur Sawhney (Commack High School)

Microbiology and Biochemistry

Secretion of the Francisella tularensis Protein FTL_1123 by Escherichia coli Containing the HlyBD Operon

H.M

Ishana Chadha (Commack High School)

Cellular and Molecular Biology with Biomedical Engineering

The Effect of Metal Toxicity Induced mtDNA Mutations on Parkinson's Disease Pathology in Model Organism C. elegans

East Hampton High School

1ST

Leah Irene Fromm (East Hampton High School)

Plant Sciences

Growth promotion of hydroponic Lactuca sativa var. capitata and microgreen Raphanus sativus when exposed to Pseudomonas psychrotolerans consistently throughout the growth period

2ND

Dylan Ann Cashin (East Hampton High School)

Embedded, Technology Arts, Technology Engineering, and Energy Sustainability

Saccharina latissima in biofuel production: Identifying the ideal water conditions and their effect in biofuel production through a chemical extraction method

3RD

Meredith Margaret Browne (East Hampton High School)

Plant Sciences

Influence of mycorrhizal inoculants on mass, and water uptake in Lactuca sativa var. capitata under salt stress

H.M

Cameron Oliver Mitchell (East Hampton High School)

Plant Sciences

Influence of common chemical phosphorus and nitrogen fertilizers with mycorrhizal fungi Rhizophagus and Glomus families on the growth of Pisum sativum legumes.

Elmont Memorial

H.M

Aafia Ahmed (Elmont Memorial)

Cellular and Molecular Biology with Biomedical Engineering

Investigating the JAK2/STAT3 Signaling Pathway in Methylmercury-Induced Toxicity in Mouse Astrocyte Neuronal C8-d1a Cell Line

Garden City High School

1ST

James Nagler (Garden City High School)

Embedded, Technology Arts, Technology Engineering, and Energy Sustainability

Project Vision - Assisted Navigation & Waypoint Positioning through 3D Mapping

2ND

Mannat V. Jain (Garden City High School)

Computational Biology and Bioinformatics

A Deep Learning Algorithm to Identify and Predict Tissue Abnormality in Fetal Ultrasounds.

3RD

Sarah Phinney (Garden City High School)

Embedded, Technology Arts, Technology Engineering, and Energy Sustainability

Using an Intraoral Scanner to Extract and Evaluate Contours of Oboe Reeds

H.M

Amy Hong Xiao (Garden City High School)

Translational Medical Science

A Novel Approach to Characterizing Pathogenicity of SLC25A13 Variants in Patients with Citrin Deficiency

George W. Hewlett High School

3RD

Ariella Joy Golbin (George W. Hewlett High School)

Plant Sciences

Regulation of Mitogen-activated Protein Kinase Kinase 7 (MKK7) affects salt tolerance in the gametophytes of Ceratopteris richardii?

H.M

Samuel Hsu (George W. Hewlett High School)

Plant Sciences

A Matrix Metalloproteinase (MMP) Regulated By Salicylic Acid (SA) And Lipopolysaccharide (LPS) Plays An Integral Role In Prothallial Development Of Gametophytes Of Ceratopteris richardii

H.M

Dylan Dale Butler (George W. Hewlett High School)

Chemistry and Material Science

Synthesis of N2, N4-Disubstituted quinazoline-2,4-diamine Derivatives as inhibitors of Adenosine/Guanosine Nucleoside Hydrolase in Trichomoniasis

Half Hollow Hills East

1ST

Rishi Aravind (Half Hollow Hills East)

Cellular and Molecular Biology with Biomedical Engineering

A Novel Role for aIIbB3 in the Development of Procoagulant Platelets via Phosphatidylserine (PS) Exposure

1ST

Stasya Selizhuk (Half Hollow Hills East)

Behavioral and Social Sciences

Design of Generic Epinephrine Auto-Injector Minimizes Administration Error and Fingerstick Injury

Half Hollow Hills West

1ST

Arav Chand (Half Hollow Hills West)

Math, Physics and Astronomy

Extensions of Legendre's Formula and Fine's Theorem to the Fibonacci Factorial

Herricks High School

2ND

Hiuyi Cheng (Herricks High School)

Biomedical and Health Sciences

Evaluating Border Associated Macrophages: A Novel Approach to Investigating Cerebral Blood Flow Dysregulation in APOE4 Mice

2ND

Allison Chen (Herricks High School)

Earth and Environment with Environmental Engineering

The Accelerated Retreat of Andean Glaciers: Using Google Earth Engine and Landsat Satellite Imagery to Quantify the Imminent Threat to Water Security in Andean Communities

3RD

Rebecca Bover (Herricks High School)

Biomedical and Health Sciences

The Novel Effect of Rosuvastatin on Cholesterol 25-Hydroxylase (Ch25h) Oxysterol Metabolism and IL-6 in Response to LPS and ssRNA40 Stimulation

H.M

Ashna Muni (Herricks High School)

Biomedical and Health Sciences

A Novel Prognostic Assessment of an Anti-tumor Biomarker: An in silico Analysis of Tumor Infiltrating Lymphocytes in Melanoma

Jericho High School

1ST

Natasha Kulviwat (Jericho High School)

Biomedical and Health Sciences

CLDN5 Downregulation and Albumin: Investigating Hallmarks of Blood-Brain Barrier Breakdown as Novel Biomarkers of Suicide Neuropathology

1ST

Katherine Lee (Jericho High School)

Animal Sciences

C-Fos and Reelin Protein Localization: Brain Fluorescence Imaging of Activity Pathways in Mice During Sensory Behavior Tasks

1ST

Manfred Lim (Jericho High School)

Earth and Environment with Environmental Engineering

From Data to Insights: Understanding Global Soil Respiration Through Machine Learning

1ST

Samyra Mahiba (Jericho High School)

Chemistry and Material Science

DNA Crystallography: Exploring Small-Molecule Interactions With DNA for Nanoscale Drug Delivery

1ST

Sophia Antonina Tarasenko (Jericho High School)

Translational Medical Science

Effects of Calcitriol on Menstrual Effluent-Derived Endometrial Stromal Cell Viability, Decidualization, and Proliferation

2ND

Lilly Sarah Horowitz (Jericho High School)

Plant Sciences

The Role of DNA Methylation as an Epigenetic Silencing Mechanism of Ds1 and Ds2 Transposition in Maize

2ND

Anjali Anand (Jericho High School)

Cellular and Molecular Biology with Biomedical Engineering

Fli1 and Galectin-3: Targets to Reduce Collagen Accumulation in Scleroderma.

2ND

Kiran Kaur Johar (Jericho High School)

Microbiology and Biochemistry

Determination and Analysis of Apolipoprotein-L1 Binding Site Nature with Partnering Isoforms to Treat APOL1-Mediated Kidney Dysfunction

3RD

Matthew Wang (Jericho High School)

Behavioral and Social Sciences

Elucidating Adolescent Mental Health via Social Determinants of Mental Health Clusters

John F. Kennedy High School

1ST

Ava Brooke Goldsmith (John F. Kennedy High School)

Cellular and Molecular Biology with Biomedical Engineering

Targeting of Epichaperome Downregulates HCFC1 Mediated Transcription of Oncogenes: Implications in Breast Cancer Therapy

3RD

Jayden Tucker Simon (John F. Kennedy High School)

Microbiology and Biochemistry

The Utilization of Metagenomics to Determine the Effects of Plastic Polymer Types and a Temporal Gradient on Microbial Communities

John L. Miller Great Neck North High School

2ND

Nicole Lynn Yeroushalmi (John L. Miller Great Neck North High School)

Animal Sciences

The Effect of Diet on Galleria mellonella Larvae's Resistance to Bacillus thuringiensis

H.M

Lillian Wu (John L. Miller Great Neck North High School)

Biomedical and Health Sciences

Developing an Organoid Model Using Mouse Intestinal Stem Cells To Examine the Effect of Retinoic Acid on Inflammatory Bowel Disease

H.M

Nicole Kiaei (John L. Miller Great Neck North High School)

Microbiology and Biochemistry

The Binding Affinity of Python-Derived 16α-Hydroxylated Bile Acid 'Pythocholic Acid' to Human Bile Acid Receptors TGR5, FXR, and VDR

Lynbrook Senior High School

2ND

Nora Kathleen Kane (Lynbrook Senior High School)

Math, Physics and Astronomy

Analysis of Fourier Transforms Using a Combined Encoder-Decoder and Deep Neural Network Model: A Novel Method for Determining Chromaticity

Manhasset High School

1ST

Alena Tsai (Manhasset High School)

Biomedical and Health Sciences

Integrated In-silico and In-vitro Experimental Strategies for the Application of Carbon Quantum Dots in Alzheimer's Research

1ST

Dylan Yoon (Manhasset High School)

Earth and Environment with Environmental Engineering

The Enhancement of a Novel 3D-Printed Electrodialysis Device through the Implementation and Optimization of Spacer Designs

2ND

Shuewei Chen (Manhasset High School), Sonali Patel (Manhasset High School)

Earth and Environment with Environmental Engineering

Adapted Algae-Powered Photovoltaic Cells Remediate Microplastics From Water: A Cost-Effective and Sustainable Solution

2ND

Marcus Wu (Manhasset High School)

Robotics, Intelligent Machines and Software

Optimizing Measurement Error Mitigation to Account for Cross-Talk Errors in Superconducting Quantum Computers

3RD

Emily Zhao (Manhasset High School)

Earth and Environment with Environmental Engineering

Novel Eutrophication Remediation Turbine For Piezocatalytic Inactivation Of Anabaena In Optimized Turbulent Flow

3RD
Hannah Rubin (Manhasset High School)
Cellular and Molecular Biology with Biomedical Engineering
Assessing the quality of 5% GelMA bioink
H.M
Alex Lu (Manhasset High School), Johnny Liu (Manhasset High School)
Robotics, Intelligent Machines and Software
Context Is All You Need: Learning Context-Based Emotional Nuances From Uncontextualized Labels

North Shore High School

1ST
Kaitlin Kaiting Ho (North Shore High School)
Animal Sciences
Cocoa's Cognitive Triumph: The Rescue of the Alzheimer's Model of Drosophila melanogaster with Theobroma cacao Supplementation
3RD
Eli Joshua Weseley-Jones (North Shore High School)
Behavioral and Social Sciences
Improving Understanding of Conditional Probability in Medical Screening Tests

Paul D. Schreiber High School

3RD
Yasmeen Antonia Muñoz (Paul D. Schreiber High School)
Animal Sciences
Host Preference of the Spotted Lanternfly, Lycorma delicatula (Hemiptera: Fulgoridae), Throughout its Life Cycle: A Citizen Science Observational Analysis
3RD
Tej Jonah Parekh (Paul D. Schreiber High School)

Earth and Environment with Environmental Engineering

Utilizing Artificial Intelligence for Categorizing Wildfire Origins through Satellite Image Analysis

3RD

Holly Rae Sternlicht (Paul D. Schreiber High School)

Behavioral and Social Sciences

Investigating the Influence of Closed Captions on Viewers' Advertisement Experience

H.M

Margit Tess Romero (Paul D. Schreiber High School)

Animal Sciences

Estimating the Density of the Endangered Agile Gibbon (Hylobates agilis) Using Passive Acoustic Monitoring

H.M

Hannah Isabelle Rosenberg (Paul D. Schreiber High School)

Behavioral and Social Sciences

Christian Nationalism, Anti-Semitism, and Attitudes Toward the War in Ukraine

Plainedge High School

H.M

Damariz Irene McCrae (Plainedge High School)

Behavioral and Social Sciences

Predicting GOP Voter Preferences Through Sentiment, Polarity, and Word Cloud analyses of Political Rhetoric from The 2023 GOP Primaries; Implications on the Democratic Process

Plainview-Old Bethpage JFK High School

1ST

Yoav Zeev Muscal (Plainview-Old Bethpage JFK High School)

Earth and Environment with Environmental Engineering

Using Machine Learning Species Distribution Modeling as a Novel Approach to Efficiently Predict Forest

Development Suitability

1ST

Syon Khatter (Plainview-Old Bethpage JFK High School)

Behavioral and Social Sciences

Investigating Impacts of Sucralose on Hedonic Feeding Behaviors in C. elegans as a Model for Prevention and Treatment of Obesity and Eating Disorders

2ND

Ryan Joon Yong Lee (Plainview-Old Bethpage JFK High School)

Behavioral and Social Sciences

Investigating the Effects of Emotional Parent-Child Communication and Perceived Parental Acculturation on the Coping-Self Efficacy of Adolescents

Roslyn High School

1ST

Tessla Chan (Roslyn High School)

Computational Biology and Bioinformatics

Utilizing Deep-Learning to Facilitate Diagnosis of Look-Alike Leukemia Subtypes

3RD

Shayla Zheng (Roslyn High School)

Biomedical and Health Sciences

Cell Fusion as a Novel Mechanism Behind JQ1 Resistance in Triple-Negative Breast Cancer

3RD

Aasiya Zehra Zaidi (Roslyn High School)

Cellular and Molecular Biology with Biomedical Engineering

Reading the Book of Life, One Palindrome at a Time: Creating Novel Short Palindromic Sequence Detectors and High-Resolution Conservation Tools to Identify Important Sequence in C. elegans

3RD

Cayden Shen (Roslyn High School)

Math, Physics and Astronomy

Using an Inexpensive Night Vision Camera as a Detector in NIR Spectroscopy

H.M

Alexandra Kanner (Roslyn High School)

Behavioral and Social Sciences

The Effect of Logo and Board Representation on Perceptions of Autism Advocacy Organizations

H.M

Ethan Cole Berkowitz (Roslyn High School)

Math, Physics and Astronomy

The Strength of p-Coloring as a Knot Invariant

Sacred Heart Academy

3RD

Kayla Palumbo (Sacred Heart Academy)

Animal Sciences

CAN MODERN BLUE LIGHT-BLOCKING TECHNOLOGY EFFECTIVELY SHIELD DROSOPHILA MELANOGASTER FROM HARM?

H.M

Evalina Lentini (Sacred Heart Academy)

Biomedical and Health Sciences

Evaluation of Therapeutics to Target ?Stem Cell-Like Prostate Cancer

Smithtown High School East

2ND

Jolene Hanying Cao (Smithtown High School East)

Chemistry and Material Science

Synthesis of Stable and Magnetically Tunable Cesium Lead Halide Perovskite Quantum Dots by Nano-Encapsulation

3RD

Dylan Jinghong Shen (Smithtown High School East)

Earth and Environment with Environmental Engineering

A Novel Algorithm for Measuring Forest Incursions Using Pixelated Remote Sensing Data

Smithtown High School West

2ND

Gunoo Shin (Smithtown High School West)

Earth and Environment with Environmental Engineering

Erosia: A Fully Digitally Focused Application to Accurately Compute Soil Erosion in a Raster Format via GIS Based on the Universal Soil Loss Equation.

St Anthony's High School

H.M

Sahil Nilesh Patel (St Anthony's High School)

Cellular and Molecular Biology with Biomedical Engineering

Unraveling a Circrna-Mirna-Mrna Axis: A Potential Therapeutic Target for Non-small Cell Lung Cancer

Syosset High School

2ND

Griffin Hon (Syosset High School)

Biomedical and Health Sciences

Evaluating Differential Nutritional Regulation of Stem Cell Plasticity

3RD

Michael Ren (Syosset High School)

Computational Biology and Bioinformatics

Elucidating Resistance Mechanisms in Staphylococcus epidermidis: A High-Performing MALDI-TOF MS-Based Proteomic Approach for Predictive Modeling

3RD

Alex Chen (Syosset High School)

Translational Medical Science

Evaluating the Neuroprotective Effects of Spearmint Oil in the Caenorhabditis elegans Model of Alzheimer's Disease

H.M

Brenton Lee (Syosset High School)

Animal Sciences

The Effects of Astragalus membranaceus Derivatives on the Prevention of Neuron Degeneration Caused by Amyotrophic Lateral Sclerosis in C. elegans and Computational Protein Software

H.M

Vincent W. Huang (Syosset High School)

Embedded, Technology Arts, Technology Engineering, and Energy Sustainability

An Aerodynamic Analysis of Blended-Wing Body Aircraft with Nonplanar Wing Geometry

H.M

Oscar Wang (Syosset High School)

Earth and Environment with Environmental Engineering

Scale-Invariance of Trait Distribution Patterns in Tropical Trees: Consistency Across Spatial Scales

The Wheatley School

2ND

Madeline Ella Rong (The Wheatley School)

Cellular and Molecular Biology with Biomedical Engineering

Investigating the Impacts of Dasatinib, Resveratrol and Gallic Acid on Non-Hodgkin's Lymphoma Cell Proliferation

3RD

Alaina Brooke Pinto (The Wheatley School)

Biomedical and Health Sciences

Microscopy of Claudin and Occludin Internalization in Brain Endothelial Cells After IL-32 Stimulation.

3RD

Derek Zhang (The Wheatley School), Ashley Huang (Syosset High School)

Chemistry and Material Science

The Impact of Titanium Dioxide Nanoparticles on Keratinacyte Proliferation and Differentiation

Valley Stream South High School

2ND

Ashley-Ann Vinece Francis (Valley Stream South High School)

Behavioral and Social Sciences

Childhood Environment & Maternal vs. Paternal Role in Food Addiction Development: A Cross-Cultural Study

H.M

Bethany Marie Kosinski (Valley Stream South High School)

Earth and Environment with Environmental Engineering

The Effect of Increased Oxygen and Temperature on Microalgae's Ability to Remove Phosphorous and Nitrogen From Water Samples

W.C. Mepham High School

H.M

Matt Yang (W.C. Mepham High School)

Computational Biology and Bioinformatics

MultiFormer: Single-Cell ATAC to RNA Prediction Framework

Walter G. O'Connell Copiague High School

3RD

Andrew Michael Falco (Walter G. O'Connell Copiague High School)

Earth and Environment with Environmental Engineering

The Use of Pueraria montana in the Production of a Biodegradable Low Density Polyethylene Plastic

Ward Melville High School

2ND

Bradley Scott Kelton (Ward Melville High School)

Earth and Environment with Environmental Engineering

Geochronologic and Dynamic Constraints on the Topographic Evolution and Critical Mineral Deposits of the Southwestern United States

3RD

Yujay An (Ward Melville High School)

Earth and Environment with Environmental Engineering

Understanding the Predictability of the U.S. Seasonal Surface Temperature with Convolutional Neural Networks Trained on CESM2 LENS

3RD

Benjamin Hongxuan Zhang (Ward Melville High School)

Math, Physics and Astronomy

Emulating Quenching in Galaxy Groups Using High-Resolution Cosmological Simulations

H.M

Alenna Lin (Ward Melville High School)

Earth and Environment with Environmental Engineering

AOP (Advanced Oxidation Process)/ARP (Advanced Reduction Process) for PFAS in Water Systems

Westhampton Beach High School

2ND

Jessica Mary Curran (Westhampton Beach High School)

Plant Sciences

The Efficacy of Rhodophyta as a Seaweed Liquid Fertilizer through Okra and Arabidopsis Growth,

Pigment Concentration, and Macronutrient/Micronutrient Distribution Using Tender Energy Spectroscopy

H.M

Grace Kathryn Orr (Westhampton Beach High School)

Earth and Environment with Environmental Engineering

Calcium Hydroxide Enhances the Adaptive Ability of Coral Species E. Ancora, D. Actinodiscus, and M. Capricornis, Exposed to Decreased pH and Elevated Temperatures in an Ocean Simulated Environment

William A. Shine Great Neck South High School

1ST

Michelle Luo (William A. Shine Great Neck South High School)

Embedded, Technology Arts, Technology Engineering, and Energy Sustainability

Anisotropic Ion Transport Properties of Thin-Film Solid Polymer Electrolytes

2ND

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

Translational Medical Science

Automated Volumetric Biomarker Segmentation and Combination for Superior ADPKD Progression Prediction using Machine Learning

3RD

Alexander Y Xu (William A. Shine Great Neck South High School)

Robotics, Intelligent Machines and Software

CARe-BERT: BERT-Powered Graph Augmentation for Context-Aware Radiology Report Retrieval

H.M

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

Computational Biology and Bioinformatics

Predicting Lobula Columnar Cell Responses in Drosophila

H.M

Sarah Sun (William A. Shine Great Neck South High School)

Behavioral and Social Sciences

Cognitive Differences in the Optimization of Entrepreneurial Constructs and Opportunity Exploitation in Experienced vs. Novice Entrepreneurs

H.M

Tiffany Zhang (William A. Shine Great Neck South High School)

Math, Physics and Astronomy

Resolving the Constraints Imposed by Chiral Effective Field Theory and Perturbative Quantum Chromodynamics on the Neutron Star Equation of State

H.M

Aman Thawani (William A. Shine Great Neck South High School)

Chemistry and Material Science

Computational Solution of the Time-Independent Schroedinger Equation via a Finite Legendre Polynomial-based Spectral Expansion