Animal Sciences

1ST

Maiya Ali Raghu (Syosset High School)

Syosset High School

The Effect of EGCG on Oxidative Stress in C. elegans

2ND

Jordyn Paige Krinsky (John F. Kennedy High School)

John F. Kennedy High School

The Combinatorial Effects of Diet and Caffeine Mitigate Parkinson's Disease in a Drosophila melanogaster System

3RD

Julia Mary Levine (John F. Kennedy High School)

John F. Kennedy High School

Reduced Fasciclin 2 Expression in Drosophila melanogaster Leads to Impaired Locomotor Function and Abnormal Stress Response Following Dietary Alterations of Carbohydrates in a Celiac Disease Model

H.M

Mary Helen Menger (Sacred Heart Academy)

Sacred Heart Academy

Canaries in the Coalmine: Evaluating the Effect of Petrochemical Contamination on the Cardiovascular Health of Daphnia Magna

Behavioral and Social Sciences

1ST

Isabella Souza (Syosset High School)

Syosset High School

Seeing Through the Scan: The Impact of fMRI Evidence on Juror Satisfaction and Verdicts

1ST

Nethmi Withanage (Smithtown High School East)

Smithtown High School East

The Analysis of the Use of Color in Pandemic Artwork Using Digital Quantifications

1ST

Carly Sara Friedman (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

Education During a Pandemic: Exploring the Effectiveness of Synchronous versus Asynchronous E-learning From A Teacher's Perspective

2ND

Aaliyah Naomi Bullen (Half Hollow Hills West)

Half Hollow Hills West

The Prevalence of Energy Intake Methods in New York State Obesity Prevention Policies

3RD

Erin Lynn Ye (Huntington High School)

Huntington High School

Desde Casa: Examining the Correlation between Perception of Learning in a Virtual Model and Bilingual Vocabulary Knowledge in Spanish-Speaking ENL Students

H.M

Jennie Dapice (Syosset High School)

Syosset High School

The Influence of Political Party on the Extent of State E-cigarette Regulation

H.M

Elianna Michelle Rivera (W. Tresper Clarke High School)

W. Tresper Clarke High School

Measuring Opportunity for Immigrants Through the Creation of a Political Index: A Longitudinal Study

Biomedical and Health Sciences

1ST

Samantha Rose Radinsky (Paul D. Schreiber High School)

Paul D. Schreiber High School

The role of bone lineage cells during digit tip regeneration in adult mice

1ST

Yifang Zha (The Wheatley School)

The Wheatley School

Curcumin and Capsaicin Synergistically Suppress Neuroblastoma Tumor Development

2ND

Natalia Pahlavan (Jericho High School)

Jericho High School

AcuRe: Third-Generation Machine Learning Cancer Detection Model Using Nanopore Read Alignments

3RD

Akshay Malhotra (Ward Melville High School)

Ward Melville High School

Impact of Body Mass Index on Clinical Presentation, Management, and Outcomes in Adults with Cardiac Arrest Undergoing Coronary Angiogram

H.M

Rhea Rasquinha (Herricks High School)

Herricks High School

Identifying the Prognostic, Tumor-suppressive and Immunologic Roles of IRF5 in Breast Cancer

H.M

Andrew Khanin (Cold Spring Harbor High School)

Cold Spring Harbor High School

Testing the Effects of Flavorant Propylene Glycol Acetals on the Locomotor Behavior of Drosophila Melanogaster Using the Rapid Iterative Negative Geotaxis (RING) Assay

Cellular and Molecular Biology AND BioChemistry

1ST

Neil Mehta (Ward Melville High School)

Ward Melville High School

The Effect of IL-22 Stimulation on Paneth Cell Granule Morphology and Epithelial Cell Proliferation

2ND

Kyle Pinzon (Herricks High School)

Herricks High School

Screening and Modifying DEDDh Exonuclease Inhibitors for Targeting the SARS-CoV-2 nsp14 ExoN Catalytic Site

3RD

Miah Christina Margiano (St Anthony's High School)

St Anthony's High School

Synergy of Treatment: Therapeutic Vulnerabilities in Small Cell Lung Cancer

Chemistry AND Material Science AND Energy:Sustainable Materials & Design

1ST

Brian Insuhp Lee (Plainview-Old Bethpage JFK High School)

Plainview-Old Bethpage JFK High School

Evaluating the efficacy of repurposed and modified traditional eastern medicinal compounds on Coronavirus Family specific target structures.

2ND

Nishanth Chinnadurai (East Meadow High School), Udithi Kothapalli (St Anthony's High School), Hugo Patrick Onghai (Earl L. Vandermeulen High School/Port Jefferson UFSD)

East Meadow High School

Molecular-Imprinted Biosensor for SARS-CoV-2 Detection

3RD

Benjamin Alex Sherman (George W. Hewlett High School)

George W. Hewlett High School

Size Optimization of Gold Nanoparticles Functionalized on PEMFC Interfaces to Increase Power Efficiency

Computational Biology and Bioinformatics

1ST

Danielle Lauren Gruber (Great Neck North High School)

Great Neck North High School

A Game Theoretic Model of the Resting State Brain

1ST

Catherine Kim (Jericho High School)

Jericho High School

Novel Prediction of Adverse Drug Reactions and Underlying Pathological Mechanisms via Hierarchical Classification

2ND

Reid Fleishman (William A. Shine Great Neck South High School)

William A. Shine Great Neck South High School

Creation of a Machine Learning App to Facilitate Pancreatic Cancer Prediction

3RD

Mir Zayid Alam (Manhasset High School)

Manhasset High School

Identification of Genetic Biomarkers for Hepatocellular Carcinoma Using an Automated Microarray-Based Pipeline and Pathway Enrichment

H.M

Chapin Luke Zerner (Commack High School)

Commack High School

Using Machine Learning to Predict Features Related to the Adaptive Immune Response in COVID-19

H.M

Michael Chu (Syosset High School)

Syosset High School

CoronaXNet: Using Convolutional Neural Networks to Automate the Detection of COVID-19 from Chest X-Ray Images

Earth and Environmental Sciences

1ST

Ashley Katherine Roth (Lynbrook High School)

Lynbrook High School

Aquatic Habitat Nitrate Levels on Long Island: The Effect of High Nitrate Levels on Anuran Species Abundance

1ST

Rithika Narayan (Elwood - John H. Glenn)

Elwood - John H. Glenn

Harnessing Deep Learning to Assess Coral Reef Health through Crowd-sourced Efforts

2ND

Brianna Han (Commack High School)

Commack High School

Markov chain Monte Carlo methods for estimating rainfall rate from dual-polarization weather radar

3RD

Blessycicilia Sebastian (W. Tresper Clarke High School)

W. Tresper Clarke High School

Analyzing the Effect of Silver Nanoparticles on Aquatic Daphnia Magna

H.M

Rebecca Cho (Jericho High School)

Jericho High School

Associations between the North Atlantic Subtropical High and Tropical Cyclone Movement and Precipitation

H.M

Noel F Manalil (East Meadow High School), Jayden Abraham (East Meadow High School)

East Meadow High School

The Effects of Media and Hydraulic Retention time on Nitrogen Retention in Bioreactors for Wastewater Treatment

Embedded Systems AND Engineering Mechanics

1ST

Margaret Anne Gates (Wantagh High School)

Wantagh High School

Autonomous Wildfire Detection and Containment System

2ND

Ryan WIlliam Menier (Kings Park High School)

Kings Park High School

The Electron Ion Collider and the Evaluation of Steering Magnets for the Polarized Electron Source Prototype

Environmental Engineering

1ST

Julius Yoh (Manhasset High School)

Manhasset High School

The Optimization of Desalination and Ion-Removal Rate Through the Engineering of Novel Turbulent Modular Designs in an Electrodialysis System

2ND
Maya Lillian Maciel-Seidman (Bethpage High School), Suchitha Channapatna (Bethpage High School), Ruchitha Channapatna (Bethpage High School)
Bethpage High School
Solar-Powered Soil Sensing Robot: A Novel Agricultural Device for Monitoring Moisture and pH

Math AND Physics & Astronomy

1ST
Kathryn Elizabeth Postiglione (Lynbrook High School)
Lynbrook High School
Analyzing the Photometry of Star Cluster Messier 39: Creation of Color Magnitude Diagram, Age Calculation, and Distance Measurement
2ND
Uma Arengo (Long Beach High School)
Long Beach High School
Using Box-Counting Dimension to Quantify the Progressive Stages of Diabetic Retinopathy
3RD
Sameer Singh (Valley Stream South High School)
Valley Stream South High School
Exo2: An Investigation into a Novel Characterization Model for Transit Photometry

Microbiology

1ST
Giselle Leah Rasquinha (Syosset High School)
Syosset High School
FD028: A Bifunctional HIV-1 Inactivator Acts Before Host Cell Entry
2ND
Christopher Edward Alexander (Elmont Memorial)

Elmont Memorial

Avian Paramyxovirus Serotype 4 (APMV-4) Promotes Apoptotic Cell Death & Stimulated Immune Responses in Malignant Melanoma and Relapse Cancers in respect to Newcastle Disease Virus (NDV): Characterization of a Novel Oncolytic Virus

Plant Sciences

1ST

Blake Charles Lippman (George W. Hewlett High School), Tyler Logan Bissoondial (John F. Kennedy High School)

George W. Hewlett High School

Lipopolysaccharide and Galactose Induce Cell Death in Prothallial Cells of Gametophytes of Ceratopteris richardii

2ND

Leena Alzafarani (Brentwood High School)

Brentwood High School

TURN TO NATURE: THE USE OF SALT WATER FOR THE MITIGATION AND CONTROL OF JAPANESE KNOTWEED, REYNOUTRIA JAPONICA

Robotics and Intelligent Machines

1ST

Ethan Horowitz (Manhasset High School)

Manhasset High School

CET-CNN: Modular Hierarchical Image Classification Using Conditional-Execution Tree CNNs

2ND

Mark Shapiro (Half Hollow Hills East)

Half Hollow Hills East

Analysis of Neural Network Community Structure: a Network-Theoretic Approach

Systems Software

1ST

James Connor (Northport High School)

Northport High School

Attributing State-backed Information Operations on Twitter through Machine Learning

2ND

Steven Anthony Cayea (St Anthony's High School)

St Anthony's High School

Efficiency of Data Compression Algorithms for Low-Cost Laser Transceivers

Translational Medical Science AND Biomedical Engineering

1ST

Janice Kirti Rateshwar (Jericho High School)

Jericho High School

Molecular Mechanisms of Direct Inhibition of NF-κB Subunits by 9-chloro-8-(hexyloxy)-2H-chromeno[2,3-d] pyrimidine-2,4(3H)-dione (IT-848)

2ND

Alice Zhaoyi Chen (Jericho High School)

Jericho High School

MRgRT and delta radiomics: Early prediction of survival in pancreatic cancer