

### Why was first & third place awarded without a second place?

Each award has a minimum score threshold. To be eligible for first place you must score higher than 90, for second 85 and third 80. Please keep in mind that is a minimum, so if we have a 98,97,92 then those are the First, Second & Third place winners. If we have a 92,84,80 then First & Third will be awarded with the 84 taking third.

## HIGH SCHOOL

### Biology

Taking **First** Place from **Byram Hills** for the project **Elucidating mechanisms and impacts of age-related alterations in blood-CNS barriers: A transcriptome study of the aging blood-brain barrier and the dry age-related macular degeneration retina**

**Luke Briody**

Taking **Second** Place from **Putnam Valley** for the project **Examining Differences in Blood Calcium, Phosphorus, and T4 Levels in Various Breeds of Canines: A Study on its Association Between the Age of Spay/Neutering and Osteopathic Diseases**

**Emma Silverman**

**Third Place is tied**

from **Byram Hills** for the project **Identical but not the same: utilizing the epigenome to create forensically relevant biomarkers to discriminate monozygotic twins on the basis of aging and smoking status**

**Marleigh Canter**

and from [Scarsdale](#) for the project **Design of a low resource screening technology for HIV drug resistance using SHERLOCK**

**Armaan Ahmed**

## Chemistry

Taking **second** place from [Hastings on the Hudson](#) for the project **Calculating Conduction Band Energy of CoMP11 Hydrogen Catalyst**

**Jasper Lincoln**

Taking **third** place from [Yorktown](#) for the project **Synthesis, Data Collection, and Analysis of Graphene Noble Metal Aerogels for Future Applications in Novel Energy Storage Devices**

**Francesca Mangione**

## Clinical/Social Psychology

Taking **first** place from [Byram Hills](#) for the project **How do others perceive me? An exploration of the influence of self-disclosure statements on viewer perceptions of emerging adults who stutter**

**Raquel Kanner**

Taking **second** place from [Mahopac](#) for the project **The Effects of Artificial and Natural Ambient Light on Short Term Memory**

**Victoria Longo and Olivia Saturn**

Taking **third** place from [Mahopac](#) for the project **Relationship of the Platforms Snapchat, TikTok and Instagram with Depression, Stress, and Anxiety in High School Students**

**Alexander Gaspar and Andrea Settembrini**

## Earth / Space

Taking **second** place from [Westlake](#) for the project **Calculating the Rate of Cosmic Microspherule Deposition: A Novel Global Time Marker for Geologic Reconstruction**

**Aimee Holland**

Taking **third** place from [Scarsdale](#) for the project **Using Rare Dust Absorbers to Calculate Column Density and Other Properties in the Early Universe**

**Hannah Wang**

## Engineering / Technology

### second place tie

Taking **second** place from [Byram Hills](#) for the project **The effects of scaling on muscle force production in biological machines**

**Tessa Schwartz**

and from [Yorktown](#) for the project **Utilizing a Modified Electrostatic Precipitator for the Efficient Removal of Particulate Matter at its Origin**

**Swaroop Pujari**

Taking **third** place from [Harrison](#) for the project **Creating a Wearable Device to Help Parkinson's Patients Maintain an Upright Seated Position**

**Bailey Fisher**

## Environment

Taking **first** place from [Peekskill](#) for the project **Climate-Driven Adaptation of Nutrient Preferences and Cycling of Mixotrophic Green Noctiluca scintillans in the Arabian Sea**

**Alisa D'Souza**

Taking **second** place from [Irvington](#) for the project **Effectiveness of Native and Invasive Terrestrial Herbaceous Plants in Mitigating Nitrogen in Leachate**

**Aviv Markus**

**Four way tie for third place**

Taking **third** place from [Irvington](#) for the project **The Relationship Between the American Eel Population and Chlorophyll Fluorescence**

**Samantha Levin.**

And from [Irvington](#) for the project **DNA Methylation and Virulence in Bacterial Blight Rice Pathogen Xanthomonas oryzae pv. Oryzae**

**Reinesse Wong**

And from [Hastings on the Hudson](#) for the project **Clarifying bobcat (Lynx rufus) Distribution in Westchester (NY) and Fairfield (CT) Counties: A Comprehensive Compilation of Existing Data and a Targeted Non-Invasive Camera-Trap Search in a Distribution Void**

**Cayla Ossen-Gutnick**

And from [Yorktown](#) for the project **The Impact of the Presence of Mougeotia scalaris on Macroinvertebrate Pollution Tolerance in Microcosms from Freshwater Systems**

**Maya Karintholil and Adarsh Nair**

## Health & Nutrition

Taking **first** place from **Harrison** for the project **The Epigenetic Effects of the Antioxidant, Resveratrol, on Prolonging the Lifespan of Drosophila melanogaster Over Multiple Generations**

**Larissa Iraj**

**third place tie**

Taking **third** place from **Harrison** for the project **Comparing Weight Changes During Treatment Epochs in Stroke, Traumatic Brain Injury, and Debility Patients**

**Jillian Williams**

and from **Harrison** for the project **The Effect Of The New Western Diet On The Metabolite Concentration On The Epithelial Cells And The Microbiome Of The Small And Large Intestines: A Study Of Factors That Could Lead to Tumor Development**

**Julina Paruta**

## Math / Computers

**tie for first place**

Taking **first** place from **North Salem** for the project **Investigating Neural Network Structures Through the Game of Go**

**Mark Takken.**

and from [The Hackley School](#) for the project **Evaluation and development of neural network-based methods for improved imputation of missing values in time series data**

**Daniel Zhang**

Taking **second** place from [Ardley](#) for the project **Identification of Correlated Qubit Errors for Quantum Computing Error Correction**

**Peyton Schales.**

**third place tie**

Taking **third** place from [Mahopac](#) for the project **Investigating Channel-Adapted Bacon-Shor Quantum Error Correction Codes in a Realistic Setting**

**Alexa Tyberg**

and from [Yorktown](#) for the project **Developing a Convolutional Neural Network Classifier to Identify Atrial Fibrillation Rhythms from Electrocardiogram Recordings**

**Ella Chee and Iva Chee**

## **Medicine and Medical Science & Technology**

Taking **first** place from [Ardley](#) for the project **Impact of Betamethasone on the Expression of Tyrosine Hydroxylase Positive Neurons in the Arcuate Nucleus**

**Anisha Kumar and Kaitlyn Tomeny**

### tie for second place

Taking **second** place from **Somers** for the project **Early Prediction of Alzheimer's Disease with a Multimodal Multitask Deep Learning Model**  
**Nitin Seshadri**

And from **Edgemont** for the project **Integrative Analysis of Pancreatic Ductal Adenocarcinoma Microenvironment Utilizing Omics with an Emphasis on CEACAM6**  
**Mihir Patil**

### tie for third place

Taking **third** place from **Somers** for the project **Assessing the Correlation Between Most Affected Demographics of the Novel Coronavirus (COVID19) and Vaccines Administered in the US from 1920-2020**  
**Peyton Disiena**

place from **Hastings on the Hudson** for the project **Do Bainbridge-Ropers Syndrome Causing ASXL3 Mutations Influence Transcript Stability and Exon Exclusion/Inclusion by Disrupting Exonic Splicing Enhancer Sequences?**  
**Kaylee Oppenheimer**

## Physics

Taking **second** place from **Hastings on the Hudson** for the project **An Investigation of Blazar Jet Variability through an Analysis of Ton 599**  
**Adam Oppenheimer**

Taking **third** place from **Rye Country Day School** for the project **Exploring the High-Energy Gamma-Ray Emission from Neutrino Blazar Candidate Source TXS 0506+056**

**Deepta Gupta**

## **Physiological/Experimental Psychology**

Taking **first** place from **Putnam Valley** for the project **A Visual Cortex Examination: Familiarity and Selective-ROI BOLD Signal differences between Scenes and Objects, Behaviorally and Neurologically**

**Alliyah Steele**

Taking **second** place from **Irvington** for the project **Targeting Nociceptin Receptors in Depression: A [11C]NOP1A PET Study**

**Emelyn Juenger**

Taking **third** place from **Westlake** for the project **Investigating Three Animal Models of Depression and Their Correlation with Sleep Abnormalities as a Predictor for Clinical Trials in Humans**

**Anastasia Tchernikov**

### **Top Scoring Student in High School**

*Recipient of*

**Marilyn Reiner Science In Education Award**

**Alliyah Steele**

*Putnam Valley HS*



## TOP 9 High School Exhibits, Individual or Team

### NYS Science Congress Nominees

**Alliyah Steele**

*Putnam Valley HS*

**Raquel Kanner**

*Byram Hills HS*

**Victoria Longo and Olivia Saturn**

*Mahopac HS*

**Emelyn Juenger**

*Irvington HS*

**Luke Briody**

*Byram Hills HS*

*We are pleased that all 5 Nominees have opted to go this year.*

### NYS Science Congress Alternates

**Alisa D'Souza**

*Peekskill HS*

**Anisha Kumar and Kaitlyn Tomeny**

*Ardsley HS*

**Alexander Gaspar and Andrea Settembrini**

*Mahopac HS*

**Emma Silverman**

*Putnam Valley HS*

*Please note we always choose top 9 however the amount we can send is participation driven and varies year to year.*