



LI Science & Engineering Fair, Inc.

Promoting Excellence in Scientific Inquiry and Discovery in LI Schools

LISEF 2014 Grand Award Winners

	Award	Name	School	Title
Animal Sciences	First	Allison Mary Murphy	Sayville High School	<i>Haplotype Variation in Banded Sunfish (Enneacanthus Obesus) from the Peconic River, Long Island, New York</i>
	Second	Yianni Flouskakos	Garden City High School	<i>High Fructose Corn Syrup Disrupts Circadian Rhythms of Drosophila Melanogaster</i>
	Second	Noah White	Paul D Schreiber High School	<i>An Analysis of the Population Densities of Pterois Volitans Around Day-Mooring Sites in St. Croix, USVI</i>
	Third	William Averell Engellenner	Smithtown High School East	<i>A 15-Year Longitudinal Study of the Impact of Marine Ecotourism on Antarctic Penguin Populations</i>
	Third	Catherine Feldman	Smithtown High School West	<i>Phylogenetic and Dietary Signals in the Dentition and Mandible of Carnivora (Mammalia, Placentalia): A Geometric Morphometric Approach</i>
	Third	Evangeline A Giannopoulos	William A. Shine Great Neck South High School	<i>The identification of novel Runt and Even-Skipped transcriptional co-factors in Drosophila melanogaster</i>
	Third	Brandon J Yu	Herricks High School	<i>Human Breast Milk Protein (rhMFG-E8) Reduces Autophagy and Apoptosis in Nutrient Deprived Cells</i>

	Honorable M	MaryAnn Boyce	South Side High School	<i>of Feathers with Melanin-Based and Red Carotenoid-Based Pigmentation to Bacterial Degradation</i>
	Honorable M	Rhea Fogla	Manhasset High School	<i>The Role of Complement Component 3 (C3) Deficiency in Ischemic/Reperfusion Injury of Cardiac Mice Tissues</i>
	Honorable M	Charlie Friedfeld Friedfeld	Lynbrook Senior High School	<i>A Novel Method for Investigating Memory and Social Behavior; Determining the Effects of Arbaclofen and Minocycline on Wild Type and Fragile X induced Drosophila melanogaster</i>
	Honorable M	Kevin Alexander Marino, Sumaiya Iqbal Chowdhury	Brentwood High School	<i>Is Bigger Better: Algal capture rates in the marine invader, Crepidula fornicata.</i>
	Honorable M	Jacob Strieb	Huntington Union Free School District	<i>The effects of sleep deprivation on the activation of transposable elements in Drosophila</i>

	First	Justin C Lafazan	Syosset High School	<i>A Comprehensive Study of Dollar Hegemony, Quantitative Easing, and the Foreign Exchange Market</i>
	First	Hannah Frankie Stewart	Plainview Old Bethpage JFK High School	<i>Host Preference of Wild Northern and Southern Ixodes scapularis</i>
	Second	Trisha Chabria	Plainview Old Bethpage JFK High School	<i>The Effects of Perceived Responsiveness and Egotism on Aggression</i>
	Second	Jessica Danielle Graber	William A. Shine Great Neck South High School	<i>Evolution of Learning Motivation: How Standardized Testing Scores Influence Elementary School</i>

Behavioral and Social Sciences				<i>Students</i>
	Second	Jaclyn Nicole Schess	Syosset High School	<i>The Relationship Between Statewide Demographics and Organ Donor Registration Rates</i>
	Third	Matthew Brandon Goldman	Plainview Old Bethpage JFK High School	<i>The Impact of Text State and Generational Disparity on the Visual Attentiveness and Refractory Period of Refocusing to External Stimuli</i>
	Third	Arielle Cole Heiman	Plainview Old Bethpage JFK High School	<i>The Use of Congenital Amusia Assesments as Early Predictors of Dyslexia</i>
	Third	Justin Law	Plainedge High School	<i>Cereal Killers : Market speculation and its impact on global cereal prices and availability</i>
	Third	Isabel Ren	Plainview Old Bethpage JFK High School	<i>The Effect of Emotion Regulation on Impulsivity Across Cultures</i>
	Third	Radhika Viswanathan	William A. Shine Great Neck South High School	<i>The relationship between demographic characteristics and the motivations to volunteer in free or charitable clinics</i>
	Honorable M	Michaela Ann Gawley	Paul D Schreiber High School	<i>The Relationship Between Comorbidity, Symptom Severity, and Insight in Individuals with Obsessive-Compulsive Disorder</i>
	Honorable M	Samantha Rose Ingenito	Bethpage High School	<i>The Effect of the Audience's Authority on Social Facilitation</i>
	Honorable M	Olivia Kung	Roslyn High School	<i>To Participate or Not To Participate: The Effect of Pre-Paid and Post-Paid Incentives on Participation Rates</i>
				<i>The investigation of music's effects on</i>

	Honorable M	Mary Elizabeth Leibold	Locust Valley High School	<i>memory and the effectiveness of music therapy in humanâ€™s with the use of Danio rerio research and its ability to aide Alzeihermersâ€™s patients</i>
	Honorable M	Alia Suresh Sani	Paul D Schreiber High School	<i>Infant Activity Level and its Effects on Learning Words</i>
	Honorable M	Timothy Richard Sarro, Isaiah Noel Paige	Valley Stream North High School	<i>The Effect of Classroom Integrated Technology on High School Student Motivation</i>
	Honorable M	Bianca Rose Wyman	Smithtown High School West	<i>The Effect of Personalized Music on Agitation Among Alzheimer's Patients</i>
	Honorable M	Barry Austin Yang	Roslyn High School	<i>A Rising Dragon in American Politics: Predictors of Chinese American Political Participation and Voting Behavior</i>

Biochemistry	First	Ken Aizawa	Jericho High School	<i>Interrogating SGK3 function in cancer</i>
	Second	Abhinav Talwar	Herricks High School	<i>Evaluation of the Nitric Oxide Generating Capability of the Giant Multimeric Hemoglobin from Earthworm (LtHb): a potential blood substitute candidate</i>
	Third	Monica Beth Beeferman	John L. Miller Great Neck North High School	<i>Intracellular Crosstalk in Protein Aggregation of E. coli Cells</i>
	Third	Abrar Ali Nadroo	Syosset High School	<i>Elucidation of the Role of Reactive Oxidative Species (ROS) in TGF-β21 Activation of TRPV1 in the Corneal Keratocyte</i>
	Honorable M	Priya Alagesan	Manhasset High School	<i>Defining Region-Specific Interactions of The Leading Edge Protein Complex in Saccharomyces cerevisiae</i>

	Honorable M	Andrew Perry Kurland	Cold Spring Harbor High School	<i>Impact of Nutrition on Drosophila Metabolic Responsiveness in obesity and ageing</i>
	Honorable M	Sarah Aviva Rokhlin	Oceanside High School	<i>Analysis of the spontaneous aggregation of wild type and disease-causing mutations of superoxide dismutase</i>
Cellular and	First	Ritayan Chakraborty	Syosset High School	<i>AID and its Role in Reliving the Promethean Dream</i>
	First	Scott Massa	Commack High School	<i>Alzheimer's Disease: The Effect of Neuregulin1/ErbB4 Back Signaling on β-secretase Production</i>
	Second	Christopher Joseph Giuliano	Hauppauge High School	<i>A Proposal of a Novel Molecular Mechanism Capable of Explaining Current Behavioral Epigenetic Phenomena</i>
	Second	Ravina Jain	Herricks High School	<i>Barentsz at the Interface: A New Mechanism for Intercellular Adhesion in Neuromuscular Junctions</i>
	Second	Aneri Kinariwalla	Sayville High School	<i>Coordinating Angiogenesis and Osteogenesis in Stem Cell Differentiation</i>
	Third	Eda Algur	Smithtown High School West	<i>Immortalizing primary murine microglia: developing a new tool for in culture multiple sclerosis studies</i>
	Third	Anuhita Basavaraju	Jericho High School	<i>Zip1 M region phosphorylation patterning: Implications for effective meiosis</i>
	Third	Aakash Viren Jhaveri	The Wheatley School	<i>APOL1 Risk Variants Enhance Necrotic Cell Death in Podocytes by Increasing Lysosome Membrane Permeability</i>

Molecular Biology	Third	Preeti Kakani	Jericho High School	<i>neural activity in developing mouse visual and somatosensory systems</i>
	Third	Kuan Yu	The Wheatley School	<i>Hericium erinaceus Mitigates Rotenone Induced Oxidative Stress and Neuro-degeneration: A Purification of Bio-Active Compounds Used to Treat Parkinson's disease</i>
	Honorable M	Christopher John Lastihenos	Half Hollow Hills High School East	<i>Towards the Development of an Inducible FAN1 Knockout Cell Line for the Study of Interstrand Crosslink Repair</i>
	Honorable M	Shweta Lodha	Herricks High School	<i>Glucose Compromises the Permeability of the Glomerular Basement Membrane Through Vitamin D Receptor Degradation</i>
	Honorable M	Lindsey Nicole Stevens	East Hampton High School	<i>What effect does the quantity and distribution of Tuft Cells have on the stages of pancreatic ductal adenocarcinoma</i>
	Honorable M	Julia Zeh	Paul D Schreiber High School	<i>Assessment of 16S primer sequence variation on DNA barcoding accuracy</i>
	Honorable M	Kimia Ziadkhanpour, Nicolette Almer	Plainview Old Bethpage JFK High School	<i>The Effect of Titanium Dioxide Nanoparticles on Proliferation, Differentiation and Cellular Functions of Stem Cells</i>
	Honorable M	Kara Zielinski	Oceanside High School	<i>A novel role for the KASH-Domain Protein Klarsicht in Integrin and Microtubule Regulation</i>
	First	Matthew Leong Chun	Jericho High School	<i>Stoichiometric Laser-Induced Breakdown Spectroscopy for Simple and Cost-Effective Laser Material Fabrication: A Case Study of Polycrystalline Yttrium Aluminum Garnet Ceramics</i>

Chemistry	Second	Kevin Fitzgerald White	North Babylon High School	<i>Using greenhouse gases to boost the Hydrogen economy: Bimetallic catalysts for dry-reforming of CH₄</i>
	Third	Pavithran T. Ravindran	W Tresper Clarke High School	<i>Crystallization Studies of Poly(μ-caprolactone)-Poly(ethylene oxide) blends</i>
	Third	Sachit Singal	Herricks High School	<i>Chemical and Computational Biology Approach to Identifying the Binding Site of Novel Anti-Tubercular Agents Targeting Mtb -FtsZ</i>
	Honorable M	Reva Ilyse Butensky	Plainview Old Bethpage JFK High School	<i>Evaluation of Novel Polyacrylamide Gel for Studies on Biological Redox Reactions</i>
	Honorable M	Jordan P Finzel	Kings Park High School	<i>Quantification of Synthetic Cannabinoids in Herbal Samples with Nuclear Magnetic Resonance Spectroscopy</i>
Computer Science	First	Joshua Michael Zweig	Commack High School	<i>Diagnosis of Abnormalities in 3-Dimensional Mammograms via an Artificial Neural Network</i>
	Second	Jessy Lin	John L. Miller Great Neck North High School	<i>A Visual Analytics Tool to Visualize Network Semantics by Querying the Web</i>
	Third	Daniel M Hanover	John L. Miller Great Neck North High School	<i>Connectomics in the Human Brain from Large Invasive Neurophysiological Datasets</i>
	Honorable M	Aspyn Cole Palatnick	Cold Spring Harbor High School	<i>iGenomics: Mobile DNA Sequence Analysis</i>
	First	Yongpeng Tang	Smithtown High School East	<i>Data Sonification with the Seismic Signature of Ocean Surf</i>

Earth & Planetary Science	Second	Terry Wei	John L. Miller Great Neck North High School	<i>Comparing the Back-projection Method of Analysis with the JMA HiNet catalogue using the 2011 March 11 Event to Determine the Effectiveness of Imaging Aftershocks</i>
	Third	Harrison Li	Ward Melville High School	<i>Multidecadal Changes in the Frequency and Ambient Conditions of Warm Season Convective Storms over the Northeastern United States</i>
	Honorable M	Beatrice Lauren Brown	Bellmore JFK High School	<i>Irene and Sandy – Oddity or Destiny? An Investigation of Factors Influencing Flooding Risks in the Long Island Area</i>
	Honorable M	Kathryn Rose Maupin, Jasmin Chevon Sylvia, Hifza Mateen Malik	Sachem High School East	<i>Study of Halobacterium in a Martian Environment</i>
Energy & Transportation	First	Jessica Kim, Andrew Moshova	Manhasset High School	<i>Comparison of Organized and Randomized Multilayer Nanofilms</i>
	Second	Bailey Liao	Half Hollow Hills High School West	<i>New Methods for the Prediction of Carbon Nanostructures and Their Application Towards Optimizing Electron Transfer Rates in Dye Sensitized Solar Cells</i>
	Third	Liana He	Half Hollow Hills High School West	<i>Development of a Reticulated Electrode Demonstrating Enhanced Capacitance and Power Density for Application in Supercapacitor Devices</i>
	Honorable M	Alexander Nelson Osborne	East Hampton High School	<i>Comparing Electrical Output of Dye-Sensitized Solar Cells Using of a Variety of Naturally Occurring Botanical Pigments</i>

Engineering: Electrical & Mechanical	First	Robert Joseph Myrick	Sewanhaka High School	<i>A System for the Prevention of Vehicular Heatstroke</i>
	Second	Mehtaab Singh Sawhney, David Li	Commack High School	<i>Impact of the Location of a Solar Cell, in Relationship to the Focal Length of a Fresnel Lens on Power Production.</i>
	Third	Matthew William Brandes	Paul D Schreiber High School	<i>Prototype design of a self-contained mechanical system to sense minimal water intrusion in residential structures and a study of its effectiveness.</i>
	Honorable M	Jake Eskenazi Kritzberg, Andrew Robert Luisi	Long Beach High School	<i>Evaluating the Utilization of Resistive Wire for Deicing Modern Composite Airplane Wings</i>
	Honorable M	Avery Rubin	North Shore Hebrew Academy High School	<i>Building a Human Breath Emulating Machine</i>

	First	Harry Paul	Paul D Schreiber High School	<i>Growing Spine Implant and Test Method</i>
	Second	Justin Matthew Cheung	Commack High School	<i>Gold Nanoparticles: Efficient Synthesis of Catalytically Active Nanoparticles using a One-Pot Method</i>
	Second	Allison Chowdhury, Greta Huang	The Wheatley School	<i>Functionalization of Gold Nanoparticles as Drug Delivery Agents for Treatment of Cryptococcosis</i>
	Third	Bhavani Ananthabhotla	Kings Park High School	<i>The Efficacy of Mechanical Stimulation to Improve Cortical Bone Quality in a Diet-Induced Obesity Model, as Determined by an Investigation of Mechanical, Areal and Material Property</i>
	Third	Anne Chen	Farmingdale	<i>Development of a New Catalyst for Hydrogen PEM Cell to Mitigate Carbon Monoxide</i>

Engineering: Materials & Bioengineering			High School	<i>Poisoning in the Commonly Used Platinum Membrane</i>
	Third	Aron Edward Coraor	Huntington Union Free School District	<i>Ferroelectric Photocatalysis of Hydrolysis Utilizing Novel PbTiO₃-SrRuO₃ Superlattices</i>
	Third	Samantha Paige Novotny	Half Hollow Hills High School West	<i>Matching Mechanical Properties of Porous Polycaprolactone (PCL) Scaffolds to Mature Human Articular Cartilage: A Model for Cartilage Repair</i>
	Third	Eric C. Zhang	Ward Melville High School	<i>Modulation of Shear-Induced Platelet Sensitization with Adenosine Diphosphate and Diadenosine Tetraphosphate</i>
	Honorable M	Paige Skylar Botie	Half Hollow Hills High School West	<i>Controlling Anti-Thrombogenic Properties of Polymer Surfaces through Sterilization Techniques for the Development of Safer Medical Device Implantation</i>
	Honorable M	Aaron Gochman	Sanford H. Calhoun High School	<i>Titanium Dioxide Nanoparticles: An Effortless Path for Staphylococcus aureus to Infect Cells</i>
	Honorable M	Sharon Lam	Syosset High School	<i>Three-Dimensional Representation of Functionally Identified Cat Pre-Bα Tzinger Complex Sites</i>
	Honorable M	Allison Lee	Hauppauge High School	<i>Mechanical Destruction of Bacteria Utilizing Graphene, Graphene Oxide, as well as Phase Separated Polymer Blends</i>
	Honorable M	Lauren Michelle Perry	The Wheatley School	<i>Realistic Tissue-Simulating Solid Hemoglobin-Containing PVA Phantoms for Optical</i>

				<i>Spectroscopy</i>
	Honorable M	Divya Guddati Rao	Half Hollow Hills High School East	<i>A Novel Microfluidic System for Enzyme Mediated Oxygen Attenuation as an in vitro Hypoxic Cell Culture Model</i>
Environmental Management	First	Emma Jing Dong, Caitlin Noelle McCormick, Grace Karen Lee	Manhasset High School	<i>A Model Approach to Harvesting Energy from a Marine Environment: The Engineering of Sediment Microbial Fuel Cells with a Modified Catalyst and Diffusion Layer</i>
	Second	Steve Daikai Zheng	Jericho High School	<i>Synthesis of a Novel Metal Organic Framework (C₂₄H₂₄CuF₆N₄O₃Si) for Gas Adsorption</i>
	Third	Theo Lauren Gibbs	Ward Melville High School	<i>Highly Permeable Nanofibrous Membrane for Membrane Distillation: Fabrication and Applications</i>
	Honorable M	Michael Joseph Cassano	Garden City High School	<i>Utilizing Phylogenetic Tree Rendering for Preserving the Biodiversity of Plant Species in Native Grasslands</i>
	Honorable M	Arielle Jillian Mcmanus, Chandler Julianne McMillan, Jamie Lauren Morgenstern	Long Beach High School	<i>Can varying the amounts of polyvinyl in hydrogels and varying the contact time between hydrogel and ion solutions lead to increased adsorption of nitrates and phosphates?</i>
	First	Varsha Venkatesh	Jericho High School	<i>Investigating the use of Plant Xylem from Angiosperm Wood Species as Organic Water Filters</i>
	Second	Albert Kim	Manhasset High School	<i>Environmental Toxins, Oxidative Stress, and Mitochondrial Dysfunction in HTB-11 cells: New Approach to Alzheimer's Disease</i>

Environmental Sciences				<i>Therapy</i>
	Second	Benjamin H November	Bellmore JFK High School	<i>Measurement of Leaf Properties to Improve the Parameterization Used by Earth System Models to Estimate the Maximum Capacity for CO₂ Uptake in the Arctic</i>
	Third	Raysa Theresa Bousleiman	Locust Valley High School	<i>Mitochondrial DNA Control Region of <i>Carcharhinus longimanus</i> Reveals Population Subdivision and Low Genetic Divergence</i>
	Third	Sara Ephesia Mikovic, Meredith Catherine Wardell, Emily Rose Brown	Babylon Jr-Sr HS	<i>The effect of apricot kernels, a proven natural pesticide, on the growth of <i>Phaseolus vulgaris</i> and <i>Cynodon dactylon</i></i>
	Third	Chelsea Ramjeawan	Uniondale High School	<i>WASTEWATER CLEAN-UP: <i>Carpobrotus edulis</i> Adsorbent of Industrial Pollutants</i>
	Honorable M	Jared Katzen	Syosset High School	<i>Utilizing <i>Cyphoma gibbosum</i> and <i>Diadema antillarum</i> As Early Indicators of Change Within the Bacalar Chico Marine Reserve's Reef Ecosystem</i>
	Honorable M	Anja Schaefer Kenagy	Half Hollow Hills High School East	<i>Elucidation of a Relationship between Total Mercury Concentration and Condition Factor in <i>Menidia menidia</i> as a Consequence of Latitude-Dependent Growth Patterns</i>
	Honorable M	Dominick Prudente	Oceanside High School	<i>Assessing the Affects of Hurricane Sandy: Increased Nutrient Loading from the Bay Park Sewage Treatment Plant</i>
	Honorable M	Leslie Nicole Toohey	Oceanside High School	<i>An Analysis of Growth Rates and Nitrogen Uptake in an Abundant Seaweed in Jamaica Bay,</i>

				New York
Mathematical Sciences	First	Sarah Alyse Jacobs, Luke Matthew Farrell	Hauppauge High School	<i>A Regional Analysis of Twitter as an Effective Means to Monitor the Spread of the 2012-2013 Influenza Epidemic In the United States</i>
	Second	Jimin Kong	Syosset High School	<i>Proving the Rational Numbers Countable</i>
	Third	Richie Lee	Jericho High School	<i>Creation of a Novel, More Powerful Test for Normality</i>
	Honorable M	Akilesh Nagasai Tangella	Ward Melville High School	<i>Generalized Closed Form Equations for Modeling Blood Platelet Geometry</i>
	First	Lelina Chang	William A. Shine Great Neck South High School	<i>Investigating the Role of Lymphocyte Osteopontin (OPN) in the Progression of Obesity</i>
	First	Kanav Gupta	Jericho High School	<i>Quizartinib (AC220) reverses ABCB1- and ABCG2- mediated multidrug resistance (MDR)</i>
	Second	Rachel Lauren Mintz	Roslyn High School	<i>The Influence of Magnesium Deficiency and Cisplatin on Oxidative Stress in Kidney Epithelial Cells</i>
	Second	Matthew Mark O'Connell	Commack High School	<i>Overcoming Language Barriers and Poor Health Literacy: A Computer Application to Relay Pharmaceutical Information through Pictograms</i>
	Second	Simon Levi Shapiro	Paul D Schreiber High School	<i>Preferential Genetic Expression in Regions Susceptible to Vulnerability in Alzheimer's Disease</i>
	Third	Stephanie Badir	Commack High School	<i>New York State School Nurses' Comfort and Knowledge Caring for Students with Diabetes Mellitus: A Cross Sectional</i>

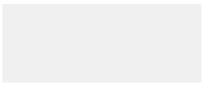
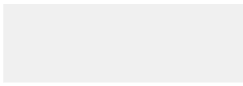
Medicine & Health Sciences				<i>Study</i>
	Third	Samara Ford	Valley Stream North High School	<i>An Examination of the Concordance Between the Patient Self Report and the Medical Record</i>
	Third	Kavita Gera, Ayyan Shakil Zubair	East Meadow High School	<i>Designing a Comprehensive Survey to Aid in the Effective Diagnosis of Celiac Disease</i>
	Third	Thomas M Keady	South Side High School	<i>Association Testing on an Aggregate of Case-Control Cohorts Identifies Novel MPN Risk Loci</i>
	Third	Noshin Khan	Central Islip High School	<i>The Effect of Sevoflurane on Currents Through Heteromeric $\alpha 1\beta 2$ Glycine Receptors</i>
	Third	Joseph Christian Schindler	Oceanside High School	<i>The Role of Macrophage-Derived IGF-1 in Lipolysis</i>
	Honorable M	Justin Neel Borczuk	The Wheatley School	<i>Validation of Protein Expression of the 8q Amplicon in Ovarian Carcinoma</i>
	Honorable M	Alex Devarajan	Half Hollow Hills High School East	<i>Ethyl Pyruvate Attenuates Systemic Inflammation Via Inhibition of Inflammasome Activation</i>
	Honorable M	Shashank Gupta	Ward Melville High School	<i>Analysis of Hemichannel Functionality to Determine the Mechanisms by Which GJB2 Mutations Cause Cx26 Associated Syndromic Deafness</i>
	Honorable M	Evan Michael Hochhauser	Half Hollow Hills High School West	<i>Examining Shear Stress Stimulated Endothelial Cell Matrices as a Viable Model for ex vivo Neural Stem Cell Production</i>
	Honorable M	Tazim Sameer Merchant	Locust Valley High School	<i>Strain/PV/M: A Novel Index of Myocardial Contractility Based On Non-Invasive CMR</i>
			Smithtown	<i>The Genetics of</i>

	Honorable M	Nallammai Muthiah	High School East	<i>Runt-Mediated Transcription Regulation in the Drosophila Embryo</i>
	Honorable M	Meghana Nyapati Rao	Massapequa High School	<i>The modulation of Keratinocyte Growth Factor (KGF) via sex steroid ablation and its effect on thymopoiesis</i>
	Honorable M	Alan Yinong Wei	Ward Melville High School	<i>Impact of Brief Visual Deprivation on Cortical Inhibitory Neuron Activity</i>

Microbiology	First	Amy T Xu	Jericho High School	<i>Host-specific binding of ClfB in Staphylococcus aureus nasal carriage, year 2</i>
	Second	Neil Mathew Thivalapill	William A. Shine Great Neck South High School	<i>Design, Synthesis, and Testing of Novel Inhibitors Against InhA in Mycobacterium tuberculosis</i>
	Third	Matthew Tyler Menold, Peter Ludvig Davis	East Hampton High School	<i>Attractive Properties of Western Harvester Ants to Distinct Isolates of Entomopathogenic Fungi: Beauveria bassiana and Metarhizium anisopliae</i>
	Third	Stephanie Ying	Manhasset High School	<i>Elucidating the interactions between the envelope glycoprotein gp41 of HIV-1, gC1qR and C1q: Relevance to HIV-1 pathogenesis</i>
	Honorable M	Stephanie Morgan Gavin	Sachem High School East	<i>Towards the Prevention of Tooth Decay: Synergistic Effects of Phytochemicals on Inhibition of Streptococcus mutans Biofilm</i>
	Honorable M	Cristina Bridget Lai	William A. Shine Great Neck South High School	<i>Characterization of the Mechanism and Inhibition of Yersinia pestis FabV through Mutational Studies</i>
	Honorable M	Emily Rose Mozdzer, Jessica Sydney Mero	Garden City High School	<i>Chemotactic Responses to Artificial Sweeteners in Tetrahymena thermophila.</i>

Physics and Astronomy	First	Luhong Li	John L. Miller Great Neck North High School	<i>Velocity Gradients in Relation to Spatial Scale of Star-Forming Dense Cores in the Perseus Molecular Cloud</i>
	Second	Justin Samuel Calamari	Paul D Schreiber High School	<i>Modeling Placental Networks Using Optimal Transport Paths</i>
	Third	Kevin Reis Chaves	Kings Park High School	<i>Analysis of Long-Term Muon Flux Data at Sea Level and a Novel Muon Detector Design</i>
	Honorable M	Kevin Li Huang	Jericho High School	<i>Fringe E-Fields of Flat and Cylindrical Deflectors and a New Proposal for the Proton EDM Experiment</i>
	Honorable M	Ganesh Ravichandran	W Tresper Clarke High School	<i>Optimization of the False Positive Probability Analysis of Kepler Planetary Candidates</i>

Plant Sciences	First	Clara Sava-Segal	John L. Miller Great Neck North High School	<i>The Expression and Regulation of Aq BANQUO in Aquilegia</i>
	Second	Katherine Vera	Farmingdale High School	<i>Cell-To-Cell Trafficking: Plasmodesmata-Located Proteins Influence Phenotype In Arabidopsis</i>
	Third	Ishmael Rahim	Brentwood High School	<i>Under cover: Nutrient, temperature, and salinity stressors on aquatic floating plant performance</i>
	Third	Mahesh Tiwari	Floral Park Memorial High School	<i>Testing the Stimulatory Effects of Richeria grandis</i>
	Honorable M	Ayman Noor Haider, Michael Ian Green, Stephen Ng	GW Hewlett High School	<i>Novel FyPP Protein Phosphatase 2A with Puroindoline B Domain Binds to Phytochromes in Ceratopteris richardii</i>
	Honorable M	Ali Saad-Eldin, Kevin Saravia, Saad Faruque	Smithtown High School West	<i>Benthic Barriers: An investigation of eradication methods of Variable Leaf watermilfoil,</i>



*Myriophyllum
heterophyllum*