



# LI Science & Engineering Fair, Inc.

Promoting Excellence in Scientific Inquiry and Discovery in LI Schools

## Junior Varsity 2019 Award Winners

	Award	Name	School	Title
	First	<b>Abigail Akselrod, Ikshu Pandey</b>	East Meadow High School	<i>The Effect of Electromagnetic Radiation on the Tunneling Behaviors of Ants</i>
	First	<b>Nicole Julia Blattman</b>	Roslyn High School	<i>Small Proteins, Large Roles: Resolving the Structure of Small Vasohibin-Binding Proteins Using E. coli Heterologous Expression and Nuclear Magnetic Resonance Spectroscopy</i>
	First	<b>Sabrina Nicole Eager</b>	Syosset High School	<i>Comparing Actual and Perceived Creativity Differences Among Students Across Academic Disciplines</i>
	First	<b>Emily Gan</b>	Jericho High School	<i>Optimization of Year-Round Outdoor Algal Cultivation: Fluorophore-Enhanced Photofluorescence Density of Photosynthetically Active Radiation</i>
	First	<b>Timothy J Langone</b>	W. C. Mepham High School	<i>The Effects from Allelopathic Signals of Astroplants Grown in Soil as Compared to Simulated Martian Regolith</i>
	First	<b>Giselle Leah Rasquinha</b>	Syosset High School	<i>The Enhancement of HIV-1 Fusion Inhibitor Potency by Key Residue Mutagenesis and C-terminal Anchor Addition</i>
	First	<b>Jeannie Ren</b>	Paul D. Schreiber High School	<i>Inside the Black Box: Topological Memorization and Generalization of Convolutional Neural Networks</i>
	First	<b>Sona Santy</b>	Syosset High School	<i>Coordinated Evolutionary Growth in the Cerebellum and Cerebrum</i>
	First	<b>Sarah Bella Shao, Kaitlyn Joann Clarke</b>	Manhasset High School	<i>The Efficiency of Aluminum Oxide, Sodium Alginate, and Activated Charcoal as Hybrid Materials in the Adsorption of Methylene Blue</i>
				Great

	<b>First</b>	<b>Jaekeun Sung</b>	Neck South High School	<i>Pneumatic Actuator Operated by Electrolysis of Water and Fuel-Cell Inspired Water Generator: Artificial Muscle Module</i>
	<b>Second</b>	<b>Mir Zayid Alam, Taylor Fox</b>	Manhasset High School	<i>Blue-Light Induced Sleep-Deprivation Affects Behaviors of Drosophila melanogaster</i>
	<b>Second</b>	<b>Joshua Max De Leeuw, Benjamin Glauner</b>	Manhasset High School	<i>The Use of Calcium Carbonate to Remediate the Effects of Acid Rain on Root Growth, Germination, Chlorophyll Content, and Photosynthesis in a Glycine max Model</i>
	<b>Second</b>	<b>Joshua Alan Flashner</b>	Roslyn High School	<i>Shining a Light on the Black Box of Neural Networks</i>
	<b>Second</b>	<b>Saniya Jaidev Gaitonde</b>	W. Tresper Clarke High School	<i>Bioinformatic Interrogation of the Evolutionary Conservation of Recursive Motifs Mediating Multi-Step RNA Splicing</i>
	<b>Second</b>	<b>Sejal Gupta</b>	Hicksville Senior High School	<i>Creation of a Cost Effective Prototype for Cerebral Palsy Rehabilitation with the Implementation of an Algorithm to Trace the Path of Joints</i>
	<b>Second</b>	<b>Kayla Hsu, Mary Elizabeth Nickita</b>	Manhasset High School	<i>The Effectiveness of Pretreatment of Rhizobium leguminosarum and Ascorbic Acid on Preventing Osmotic and Oxidative Stress Caused by High Salinity in Soil</i>
	<b>Second</b>	<b>Jaime Lara Levin</b>	Paul D. Schreiber High School	<i>The Relationship Between Race and Maternal Age and Offspring Psychiatric Outcomes of Bipolar and Schizophrenia Illness: A Case-Control Analysis in Urban Populations of African American and Caucasian Descent</i>
	<b>Second</b>	<b>Marguerite Li</b>	Jericho High School	<i>Pesticides Associated with Alzheimer's Disease Prevalence: Dysfunctions in Neurological Hallmarks with Pyrethroids and Piperonyl Butoxide</i>
	<b>Second</b>	<b>Rishika Nahata</b>	Jericho High School	<i>Oxaliplatin Resistance Induced by ERCC1 in Metastatic Colorectal Cancer Patients</i>
	<b>Second</b>	<b>Deeti Patel</b>	W. Tresper Clarke High School	<i>Increasing the Effectivity of Silver Nanoparticles by Suppressing the Production of Flagellin</i>

Categories	Second	Riya Harshit Patel	Jericho High School	<i>Fluorescence Quenching by 4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid (HEPES) Buffer</i>
	Second	Elana R Pocrass	Oceanside High School	<i>Intracellular Sterol Transport using Saccharomyces as a Model</i>
	Third	Arpie Bakhshian	Lynbrook High School	<i>Development of CRISPR/Cas9 Knockout Selected Inflammatory Bowel Disease-Related genes in an In Vitro Model Using Caco2 Cells</i>
	Third	Kevin Ryan Carratu, Spyritoula Zoe Xenophontos	Manhasset High School	<i>The Effect of Curcumin on Caenorhabditis elegans dys-1 Locomotory Response, Lifespan, and Preference</i>
	Third	Gavin James Cressy, Amy Liu	Commack High School	<i>The Effect of Sugars on Ampicillin Resistance in Escherichia coli</i>
	Third	Rachel Qian Shuang Denzler, Michael Pleitez	West Islip High School	<i>Factors that Contribute to Ankle Injuries Within Adolescents</i>
	Third	Daleep Singh Grewal	Roslyn High School	<i>The Role of FYN Inhibition and Knockdown Determining Podocyte Cell Size and Actin Cytoskeleton</i>
	Third	Julie Sara Lampert	Lynbrook High School	<i>Surfactant-Mediated Liquid Crystalline Self-Assembly of Charged Nanocellulose in Organic Solvents</i>
	Third	Dylan Ira Lyman	Paul D. Schreiber High School	<i>Ambiguity in Pronouns: An Analysis of the Effect of Age and Gender on Third Person Pronoun Choice</i>
	Third	Kaylee Sanderson, Kathleen Tuohy, Julia Gambino	Seaford Senior High School	<i>Antibacterial Abilities of Seaweed Originating from the South Shore of Long Island, NY</i>
	Third	Kendall Grace Stedman	East Hampton High School	<i>Enhancing the Tolerance of Phaseolus vulgaris (Navy Beans) to Acid Rain by Exogenous and Endogenous Abscisic Acid (ABA)</i>
	Third	Rohan Surana, Kevin Chen	Commack High School	<i>An Analysis of the Relationship between Shifts in Cyclone Weather and Variable Temperature Gradients</i>
	Third	Valeria Ventura Subirachs	Sanford H. Calhoun High	<i>Estimating the Age and Magnetic Field Strength of Pulsar and Pulsar Candidates</i>

			School	
	<b>Third</b>	<b>Ava Lavinia Waxenberg, Peyton Kalb, Zubair Ali</b>	Huntington High School	<i>The Effect of Mytilus edulis on the Detoxification of Potassium Nitrate in Long Island Sound Water</i>
	<b>Honorable Mention</b>	<b>Ava J Balacek, Emily K Ma</b>	Manhasset High School	<i>Remediation of Copper Sulfate Utilizing Lemna minor, Salvinia minima, and Lumbriculus variegatus</i>
	<b>Honorable Mention</b>	<b>Ross Scot Bernstein</b>	Plainview Old Bethpage JFK High School	<i>Catecholamine Inhibition of IL-4 Induced B-Cell Activation and Differentiation</i>
	<b>Honorable Mention</b>	<b>Saurav Bhasin</b>	Plainview Old Bethpage JFK High School	<i>Using Perfusion Analysis to Evaluate the Connection of Higher Cerebral Blood Volumes with an Endothelial Growth Factor Mutation in Glioblastoma Multiforme</i>
	<b>Honorable Mention</b>	<b>Anna Giselle Carvajal, Edinelly - Peguero-Rosario</b>	Walter G. O'Connell Copiague High School	<i>The Efficacy of Sodium Alginate as a Bacterial Mitigatory Agent Against E coli</i>
	<b>Honorable Mention</b>	<b>Ethan James Chetkof</b>	Oceanside High School	<i>The Impact of IFN-gamma on Non-opsonized Phagocytosis</i>
	<b>Honorable Mention</b>	<b>Nils Robert Coffey</b>	Locust Valley High School	<i>The Use of Cryptochrome-4 in Magnetoreception in a Variety of Species</i>
	<b>Honorable Mention</b>	<b>Matthew Thomas Cornacchia, Jacob I Mohebban</b>	The Wheatley School	<i>Effect of Air Compression on the Levitation Ability of Magnetic Levitation Trains</i>
	<b>Honorable Mention</b>	<b>Eric Martin Epstein</b>	Paul D. Schreiber High School	<i>The Effect of in utero Exposure to Maternal anti-Caspr2 Antibodies on Cortical Development</i>
	<b>Honorable Mention</b>	<b>Lindsey Hope Feinstein, Madeline Grace Competello</b>	Paul D. Schreiber High School	<i>The Effects of Taurine and Organic Growth on Obesity in Lumbricus terrestris</i>
	<b>Honorable Mention</b>	<b>Sophie Arin Fries</b>	Roslyn High	<i>The Effect of Gender of Initiator and Gender of Payer on a Date on Perceived</i>

			School	<i>Attractiveness and Compatibility</i>
	<b>Honorable Mention</b>	<b>Maximus Hujik Elijah Hujik</b>	West Islip High School	<i>The Leaching of Copper from Antifouling Paint</i>
	<b>Honorable Mention</b>	<b>Lyra Yuqin Lu</b>	Carle Place High School	<i>Berberine's Effect on Abeta</i>
	<b>Honorable Mention</b>	<b>Raul Mena, Jocelin Carbajal</b>	Walter G. O'Connell Copiague High School	<i>The Effect of Organic Post-Treatment Water-Based Flame Retardant Materials on Wooden Structures</i>
	<b>Honorable Mention</b>	<b>Angela Jasmin Ochoa, Victoria Sofia Cordova-Morote</b>	William Floyd High School	<i>The Impact Zostera marina Bed Density has on Vertebrate Biodiversity Using Environmental DNA Methods</i>
	<b>Honorable Mention</b>	<b>Maddie Rubin</b>	Roslyn High School	<i>The Synthesis and Purification of Pam3CS Spacer-Tag Variants</i>
	<b>Honorable Mention</b>	<b>Feyi Rufai</b>	Roslyn High School	<i>Does That Make Me Crazy? The Effects of Treatment Type and Effectiveness on Personal Perception</i>
	<b>Honorable Mention</b>	<b>Sonia Sarju</b>	Sanford H. Calhoun High School	<i>Effects of Hypoxic Conditions on the Phototoxicity of Bugula stolonifera and Bugula neritina</i>
	<b>Honorable Mention</b>	<b>Kartik Subramanian</b>	Jericho High School	<i>Ephemeral Exit Bridges for Tor</i>