

Greater San Diego Science Engineering Fair
Category Place Awards - Senior Division
2020

Place	Project Title	Grade	School	Teacher/Advisor
SENIOR DIVISION ANIMAL SCIENCES				
1st	Aaron Huang	11	Canyon Crest Academy	A. Haas
3rd	Asael Garcia	11	Central Union High School	L. Rueda
SENIOR DIVISION BEHAVIORAL & SOCIAL SCIENCES				
1st	Hari Krishnamurthy	9	Canyon Crest Academy	A. Haas
1st	Anjana Shriram	10	Canyon Crest Academy	A. Haas
2nd	Abdullahi Ismail	10	Bright Horizon Academy	N. Naserelddin
2nd	Abdirahman Kariye	9	Bright Horizon Academy	N. Naserelddin
2nd	Sean Kim	11	The Bishop's School	L. Keller
2nd	Mustafa Mohamed	10	Bright Horizon Academy	N. Naserelddin
3rd	Brian Lee	11	Scripps Ranch High School	P. Fowler
3rd	Grace Li Albert Liu	9 9	Scripps Ranch High School	P. Fowler
3rd	Priscila Munoz	10	Central Union High School	L. Rueda
3rd	Daniella Padilla Kayla Stallworth	10 11	Central Union High School	L. Rueda
3rd	Anaid Perez	11	Central Union High School	L. Rueda
3rd	Miriam Quijada	10	Central Union High School	L. Rueda
SENIOR DIVISION BIOCHEMISTRY				
1st	Jessie Gan	11	San Diego Jewish Academy	C. Eisen
1st	Daniel Wang	10	Torrey Pines High School	B. Belyea
1st	Kate Wang	11	Canyon Crest Academy	A. Haas

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1st	Kyra Wu	Identification of Natural and Synthetic Inhibitors of E. Coli fabI through Virtual Screening	11	Canyon Crest Academy	A. Haas
2nd	Juyoung Han	Genome Editing For All Students	11	Canyon Crest Academy	A. Haas
2nd	Aditya Hegde	The Effects of Carbon Nanomaterials on the Effectiveness of Phage Therapy	10	Canyon Crest Academy	A. Haas
3rd	Vivian Li	The Impact of Diet Upon Metabolism in Fish	10	La Jolla Country Day School	D. Padgett

SENIOR DIVISION	CHEMISTRY
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2nd	Audrey Vargas	Photocatalytic Treatment of Wastewater and Hydrogen Production	11	Sweetwater High School	J. Chase
2nd	Ian Xu	The Detection and Discrimination of Volatile Organic Vapors in a Thermally Cycled Porous Silicon Photonic Crystal Nanosensor	11	Del Norte High School	F. Liao
2nd	Kane Xu	Copper Catalyzed Hydroboration of Benzylidenecyclobutanes	11	Del Norte High School	F. Liao
4th	Jasmine Magana	How a Decrease in Temperature Affects an Oscillating Reaction	10	Central Union High School	L. Rueda

SENIOR DIVISION	COMPUTER SCIENCE
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1st	Andrew Kuang	Simplified Asthma Diagnosis Through Neural Networks	10	Canyon Crest Academy	A. Haas
1st	Raj Pabari	DNA Storage - Novel, Cloud-Based Solution to Archive Digital Data Using Synthetic Nucleotides	10	Classical Academy High School	D. Bower
1st	Christopher Um	Improving Complexity of Grover's Algorithm Using Qutrits Manipulation and a Novel Two-Dimensional System of the Oracle	11	Torrey Pines High School	B. Belyea
1st	Dustin Wu	Deep Learning Jazz Ensemble	12	Pacific Ridge High School	R. Mudaliar
1st	Ellen Xu	Artificial Intelligence Based Kawasaki Disease Early Diagnosis	9	Del Norte High School	A. Callicott
2nd	Nolan Bowyer Prescott Grigsby	An Application to Calculate Individual Percent Risk of Specific Cancers	11 11	Scripps Ranch High School	P. Fowler
2nd	Petunia Rizo	Using Musical Notation to Encrypt Messages in Python	9	Mt. Everest Academy	N. Negus
2nd	Maya Rosenbaum	Game-Based Gratitude Journal App for Android	10	Canyon Crest Academy	A. Haas
3rd	Livia Liu	No Texting While Driving App	9	Olympian High School	M. Claudio
3rd	Kayla Stevenson Aditi Telang	SocialCue : Breaking Down Communication Barriers	10 10	Olympian High School	M. Claudio

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4th	Jose Arias	9	Gompers Preparatory Academy	J. Ullyott

SENIOR DIVISION	ENGINEERING: ELECTRICAL & MECHANICAL
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1st	Christopher Caligiuri	11	Canyon Crest Academy	A. Haas
1st	Marc Kuo	10	La Jolla High School	J. Coggan
1st	Michael Zeng	10	The Bishop's School	B. Heldt
2nd	Solaiman Alwazir	9	Bright Horizon Academy	N. Naserelddin
3rd	Eva Garcia	10	Central Union High School	L. Rueda
3rd	Adrian Isabelle	12	Olympian High School	M. Claudio
3rd	Diego Monroy	9	Vincent Memorial Catholic High School	R. Lizarraga
3rd	Ziyad Soliman	10	Classical Academy High School	N. Naserelddin

SENIOR DIVISION	ENGINEERING: ENERGY & TRANSPORT
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1st	Bella Rose Schremmer	9	University City High School	M. Quessenberry
3rd	Jose Vallejo	9	Gompers Preparatory Academy	J. Ullyott

SENIOR DIVISION	ENGINEERING: MATERIALS & BIOENGINEERING
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1st	Aurora Czajkowski	12	Bonita Vista High School	M. Mardahl-Dumesnil
1st	Emily Tianshi	11	The Cambridge School High School	M. Mayne
2nd	Issael Montoya	10	Central Union High School	L. Rueda
2nd	Ann Palayur	12	St. Joseph Academy	R. Sjogren
3rd	Mohammad Khan	9	Bright Horizon Academy	N. Naserelddin
3rd	Shaun Konganda	11	Canyon Crest Academy	A. Haas
3rd	Cecilia Ymaz	9	Chula Vista High School	G. Saclauso-Caro

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SENIOR DIVISION ENVIRONMENTAL SCIENCES & MANAGEMENT				
1st	Rina Cao	11	University City High School	S. Stevenson
1st	Kavya Gupta	9	Westview High School	H. Eaton
	Dagny Whall	10	La Jolla High School	
1st	Sanjana Gurram	11	Westview High School	My-N. Ingram
2nd	Mason Holmes	10	Canyon Crest Academy	A. Haas
2nd	Grace Oualline	11	La Jolla Country Day School	D. Padgett
2nd	Sabrina Sanchez	12	Bonita Vista High School	M. Mardahl-Dumesnil
3rd	Anika Krutzik	9	Vincent Memorial Catholic High School	R. Lizarraga
SENIOR DIVISION MATHEMATICAL SCIENCES				
1st	Benjamin Faktor	11	Canyon Crest Academy	A. Haas
2nd	Lou Fowler	10	Academy of Our Lady of Peace	T. Paluso
2nd	Siddhant Ranka	11	Del Norte High School	A. Callicott
SENIOR DIVISION MEDICINE & HEALTH SCIENCES				
1st	Andrew Gao	10	Canyon Crest Academy	A. Haas
1st	Ryan Huang	10	Canyon Crest Academy	A. Haas
1st	Atulya Mandyam	10	Westview High School	My-N. Ingram
1st	Alexis Negrete	12	Central Union High School	L. Rueda
1st	Jason Tang	11	Canyon Crest Academy	A. Haas
1st	Jeffrey Wang	11	The Bishop's School	A. Pelletier

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1st	Lynne Xu Develop a Human Brain Organoid Model to Investigate Neuroinflammation in Neurological Diseases	11	Torrey Pines High School	B. Belyea
1st	Wanyi Zhu Molecular Mechanisms of an HTLV Infection	11	Canyon Crest Academy	A. Haas
2nd	Pranav Bantval Rishi Chiniga The Efficacy of Topical Curcumin 5% Gel for Knee Osteoarthritis: A Pilot Study	9 10	Canyon Crest Academy Francis Parker School	A. Haas
2nd	Emily Feldstein Oxidized Metabolites of Dietary Fats Induce Liver Cell Death	11	Canyon Crest Academy	A. Haas
2nd	Morgan Feng A New Efficient Approach to Monitor Cell Response to Viral Infection	10	Westview High School	M. Christopher
2nd	Irene Huang Assessing Tennis Players' Physiological Responses Using Wearable Devices Under Different Score Scenarios	11	Canyon Crest Academy	A. Haas
2nd	Kainath Kamil Analyzing Protein Production and Gene Expression of Neurostimulant-addicted <i>Drosophila Melanogaster</i>	10	Mission Vista High School	N. German
2nd	Maxwell Yao Effect of a Combinatory RNAi Transfection on Kras-mutant Colorectal Cancer	11	Canyon Crest Academy	A. Haas
3rd	Dylan Feldstein Do Induced Pluripotent Stem Cell-Derived Extracellular Vesicles Reduce Macrophage Activation and Induce Anti-Inflammatory Effects?	11	Canyon Crest Academy	A. Haas
3rd	Briana Gonzales The Effect of Age on the Ability to Hear High Frequencies	11	Central Union High School	L. Rueda
3rd	Nanditha Krishnan Optimization of UV nm Spectroscopy for Protein Concentration for Therapeutic Applications	10	Torrey Pines High School	B. Belyea
3rd	Sebastian Mendoza Sleep Deprivation on Human Deep Tendon Reflexes	12	Bonita Vista High School	M. Mardahl-Dumesnil
3rd	Andres Morales Fast Food VS Homemade Food	9	Gompers Preparatory Academy	J. Ulyyott
3rd	Jadyn Ramirez NSAIDs: The Fastest Pain Relief	10	Central Union High School	L. Rueda

SENIOR DIVISION

MICROBIOLOGY

1st	Haya Belbese The Road to the Cure of Alzheimer's	9	Bright Horizon Academy	N. Nasereldin
1st	Kara Fan Antibacterial Polymer: Aloe Vera Synthesis of Nano-silver Polymer and its Application	9	Westview High School	M. Christopher
1st	Eleanor Jung A Novel Approach to Killing <i>Klebsiella Pneumoniae</i> Using Endolysins and Polycationic Peptides	9	Mt. Carmel High School	A. Klingborg
1st	Edward Liu Pathogenic Bacteria Disrupts Skin Barrier in Atopic Dermatitis	11	Canyon Crest Academy	A. Haas

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1st	Shukriya Osman	Antioxidants: A Potential Key In Preventing Radiotherapy Cell Toxicity	9	Bright Horizon Academy	N. Naserelddin
2nd	Ryan Clairmont	Proteus Mirabilis Exhibits Increased Susceptibility to Erythromycin During Swarming	10	Canyon Crest Academy	A. Haas
2nd	Samuel Dimmock	Does Capsaicin Decrease Quorum Sensing in Important Human Pathogen Pseudomonas aeruginosa?	11	Canyon Crest Academy	A. Haas
2nd	Raymond Li	Sensitivity of Bacteria to Metals During Lag Phase VS Growth Phase	10	Canyon Crest Academy	A. Haas
2nd	Sidharth Udata	Phage Phases: How Stress Affects Bacteriophage Transition from Lysogenic to Lytic Pathways	10	Canyon Crest Academy	A. Haas
2nd	Yashasvi Vangala	Investigation Into the Rate of Development of Phage Resistance in E.coli	11	Canyon Crest Academy	A. Haas
2nd	Justin Vaughn	Effect of Different Media on Synthesis of Silver Nanoparticles by Aspergillus niger	10	Canyon Crest Academy	A. Haas
3rd	Adhithi Narayana Murthy	Identification, Cloning, and Expression of Desaturase Enzyme in E.coli Bacteria	10	Del Norte High School	A. Callicott
3rd	Nicholas Unpingco	How Does Stress Affect Bacterial Susceptibility to Bacteriophage Infection in E. Coli?	11	Canyon Crest Academy	A. Haas
3rd	Grace Yardley	Phage Stability		Canyon Crest Academy	A. Haas
4th	Daud Abdinasir	The Effect of Vaping on Lung Cells	10	Bright Horizon Academy	N. Naserelddin

SENIOR DIVISION

PHYSICS & ASTRONOMY

1st	Francisco Catanzaro	Determining Plastics with a Grating Spectrometer	11	Cathedral Catholic High School	M. Rafie
1st	Vivek Vijayakumar	Characterizing the Pulsations of Delta Scuti Stars Using the Mg I b Triplet	11	San Marcos High School	R. Terrill
3rd	Efrain Tanori	Effect of Down Force of the Best Beyblades using a MainStays Fan	11	Central Union High School	L. Rueda

SENIOR DIVISION

PLANT SCIENCES

1st	Malvyn Lai	Effects of Mycorrhizal Networks on Carbon Flow Between Plants	9	Mt. Everest Academy	R. Pachon
1st	Skyler Williams	The Role of Increased Flavonoid Accumulation in Protection of Pollen from Ultraviolet Radiation B	11	Canyon Crest Academy	A. Haas
3rd	Noah Nafarrete	The Effect of Ferrous Iron Gluconate on Chloroplast Biosynthesis and Anthocyanin Regulation in Rotala rotundifolia	12	Bonita Vista High School	M. Mardahl-Dumesnil
3rd	Sarah Palayur	Why Do Seeds Germinate at Different Paces?	9	St. Joseph Academy	R. Sjogren
4th	Shaun Li	Effects of the Combination of Endomycorrhizal and Cyanobacterial Symbioses on Nitrogen Uptake in Hornworts	10	Canyon Crest Academy	A. Haas