



DELAWARE VALLEY SCIENCE FAIRS, INC.

Regeneron International Science and Engineering Fair 2023 Awards Ceremony May 19, 2023 Dallas, Texas

The Society for Science, in partnership with Regeneron Pharmaceuticals, announced the awards of the Regeneron International Science and Engineering Fair (ISEF) 2023. Student winners are ninth through twelve graders who earned the right to compete at the Regeneron ISEF 2023 by winning a top prize at the 2023 Delaware Valley Science Fair. This year's Regeneron International Science and Engineering Fair featured over 1700 young scientists selected from 422 affiliated fairs in more than 80 countries, regions and territories.

Award Winners from the Delaware Valley Science Fairs

Robotics and Intelligent Machines:

Samuel Wang, 17, 12th Grade, Germantown Academy, Ft. Washington, PA; *Rapid Cardiac Screening Using Deep Learning: A Novel Interpretable AI Model for Cardiovascular Health Assessment*

Grand Award: Second Place - \$2000

Special Award: Association of Computing Machinery – Third Place - \$1500

Special Award: International Council on Systems Engineering – Honorable Mention

Special Award: Shanghai Youth Science Education Society - Science Seed Award

Microbiology:

Maryam Abdel-Azim, 16, 11th Grade, Central Bucks High School East, Doylestown, PA; *Targeting Signaling Molecules of P. aeruginosa by Using Mucin as an Anti-Quorum Sensing Drug: A Novel Design to Evaluate Efficacy in the Context of Multidrug Resistance*

Grand Award: Second Place - \$2000

Translational Medical Science:

Grace Yacobe, 16, 10th Grade, Academy of Notre Dame de Namur, Villanova, PA; *Mesenchymal Stem Cell Therapy for Celiac Disease*

Grand Award: Third Place- \$1000

System Software:

Sonia Leo, 14, 9th Grade, Moorestown High School, Moorestown, NJ; *Low-Cost Real-Time Silent Communicator for Complete Quadriplegia (Paralyzed) Patients*

Grand Award: Third Place - \$1000

Special Award: Central Intelligence Agency Award – First Award - \$1000

System Software:

Zeshen Chen, 17, 10th Grade, The Hill School, Pottstown, PA; *Stroke Rehabilitation Crutch Robot with Auto-Follow and Fall Alarming System*

Grand Award: Fourth Place - \$500

Cellular and Molecular Biology:

Rayna Malhotra, 16, 11th Grade, Moravian Academy, Allentown, PA; *A Novel Epigenetic Approach for Vascular Elastic Matrix Regeneration*

Special Award: Patent and Trademark Office Society, - Second Award - \$500

Computational Biology and Bioinformatics:

Srilekha Mamidala, 17, 11th Grade, Garnet Valley High School, Garnet Valley, PA; *A Computational Systems Biology and Machine Learning-Based Approach to Predict Cognitive Disorder in the Elderly*

Special Award: Fondazione Bruno Kessler, - Web Valley Award

Physics and Astronomy:

Jerry Wang, 14, 9th Grade, Parkland High School, Allentown, PA; *Adding Kepler Data to a TESS Exoplanet Classification Model - A Novel Approach in Exoplanet Classification Utilizing Deep Learning*

Special Award: China Association for Science and Technology, - Second Award - \$1200

Since 1949, Delaware Valley Science Fairs, Inc. (DVSF) has stimulated interest in science, technology, engineering, and mathematics (STEM among middle and high school students in the tri-state region. Our vision is to bring parents, teachers, and industry together to stimulate and nurture young people so they can grow and develop into contributing members of the community. DVSF's philosophy is that students learn by doing. They learn how to think, how to identify problems that need to be solved, and to design solutions to those problems.