10 NC STUDENTS WIN AT THE 2025 REGENERON INTERNATIONAL SCIENCE AND ENGINEERING FAIR

Raleigh, N.C. – May 19, 2025 – Ten North Carolina students took home 9 Grand Awards and 3 Special Awards at the 2025 75th Regeneron International Science and Engineering Fair (ISEF). Grand Awards are awarded to 1st - 4th place in each of the 22 ISEF Categories. ISEF is the world's largest pre-collegiate STEM research competition among 1700 students from 48 states and 69 countries. This year's competition was held in Columbus, Ohio, from May 11-16, 2025. The 2026 ISEF will be in Phoenix, Arizona.

Statewide ISEF Affiliate: NC Science and Engineering Fair (NCSEF)

Jamie Cheng

Project Title: *VAMPIRE: Vital Anti-Aging MiRNAs To Promote Induced Regeneration*
Hometown: Cary, NC
School: Green Level High School
Award: ISEF Grand Award **-** Biomedical Engineering - 2nd Award $2,400

Ronit Dey

Project Title: DISTRACT: Driver Inattention State Transition Recognition Using Attention-Based Convolutional Transformers
Hometown: Waxhaw, NC
School: North Carolina School of Science and Mathematics
Award: ISEF Grand Award - System Software - 4th Award $600

Isabel Garcia

Project Title: Harnessing Coral Bacteria as Probiotics to Combat Vibrio cholerae Water Contamination
Hometown: Wilmington
School: Isaac Bear Early College High School
Award: ISEF Grand Award - Microbiology - 3rd Award $1,200

Rishidharan Jayakumar

Project Title: Unlocking CRAC Channel Modulation: Plant Metabolite-Derived ORAI1 Inhibitors Targeting E106 for Rheumatoid Arthritis Treatment Through Combined AI-Derived Virtual Screening Approaches
Hometown: Mooresville, NC
School: South Iredell High School
Award: ISEF Grand Award - Translational Medical Sciences - 4th Award $600

Clare Lee

Project Title: Non-Adiabatic Nanoreactor (NANR): A Novel Tool for in silico Photoreaction Discovery Applied to Woodward Hoffmann Ring Opening of Cis/Trans-

3,4-Dimethylcyclobutene
Hometown: Cary, NC
School: Cary Academy
Award: ISEF Grand Award - Chemistry - 3rd Award $1,200

Grisham Paimagam

Project Title: *Disease Transmission and Epidemic Thresholds on Generalized Random Hypergraph Models*
Hometown: Charlotte
School: Myers Park High School
Award: Special Award - 1st Math Air Force Research Laboratory on behalf of the United States Air Force - $750
Honorable Mention - Menger Award from the American Mathematical Society

Anna Tringale

Project Title*: Investigating the Influence of Coal Ash Heavy Metal Leachate on Thyroid Hormone Concentration, Hormone Receptor Gene Expression and Spectral Sensitivity in Danio rerio*
Hometown: Mooresville, NC
School: NC School of Science and Mathematics
Award: ISEF Grand Award - Biomedical and Health Sciences - 3rd Award $1,200

Kenna Zhang

Project Title: Promoting Equity: A Novel GAN-Based Framework for Improved MRI-Based Alzheimer's Diagnosis Utilizing Multiple Deep Learning Architectures
Hometown: Cary, NC
School: Cary Academy
Award(s): ISEF Grand Award Computational Biology and Bioinformatics - 4th Award $600
Special Award - Long Island University: Presidential Scholarships

Serena Zhang

Project Title: Design and in silico Validation of a Novel Fc-fusion Protein for the Treatment of Myasthenia Gravis
Hometown: Cary, NC
School: William G. Enloe High School
Award: ISEF Grand Award - Cellular and Molecular Biology - 2nd Award $2,400

Region 3B ISEF Affiliate: NC School of Science and Mathematics

Ava Cummings

Project Title*:* Musculoskeletal Effects of Tirasemtiv and Urtica dioica on Dstac Gene Knockdown in Drosophila melanogaster: Applications Towards STAC3 Disorder (Native American Myopathy)
Hometown: Smithfield, NC
School: NC School of Science and Mathematics
Award: ISEF Grand Award - Biomedical and Health Sciences - 3rd Award $1,200

The NC Science Fair Foundation (NCSFF) sponsors the NCSEF and its 10 regional competitions for public, public charter, private, and homeschool students across all 100 North Carolina counties. NCSFF is a 501(c) 3 nonprofit, volunteer driven organization, whose mission is to increase inquiry-based student research in STEM related areas of study in Grades 3-12 by "Inspiring Innovation in Student Research". NCSEF is the state affiliate to the Regeneron International Science and Engineering Fair (ISEF) for grades 9-12 and the Thermo Fisher Scientific Innovators Challenge for grades 6-8.

For more information about being a judge, volunteer, or sponsors, please contact Dr. Tom Williams at director@ncsciencefair.org or visit the NCSEF website at https://ncsef.org/