

TBC 2025 WINNERS

Agriculture and Food Science:

Subcategory: Ag Biotech & Food Systems – Junior (Grades 6-9)

1st – Chioma Igbokwe, T.R. Smedberg Middle School, “Smart Farming: Is it the New Future of Planting?”

2nd – Bhavya Kidambi, Stratford Middle School, “Water Efficient Plants”

3rd – Saanvi Sarurkar, Vista del Lago High School, “Gene Editing for Disease Resistant Animals”

Honorable Mentions

- Kierstyn Bonner, Simon G. Atkins High School, “Agriculture & Food Sciences”
- Dhruva Rajesh, Western Sierra Collegiate Academy, “Aquaponics vs Traditional Farming - A Comparative Study”

Subcategory: Ag Biotech & Food Systems – Senior (Grades 10-12)

1st – Kaitlyn Sayasing, Sheldon High School, “Nourish the Soil, Nurture the Future: Sustainable Farming for a Healthier Tomorrow”

2nd Tie – Sahithi Gorthi, Ridge High School, “Expanding Upwards: Vertical Farming”

2nd Tie – Long Le, Sheldon High School, “Gene Editing of Plants”

3rd Tie – Melissa (Chi) Pham, Sheldon High School, “Sweet Taste of Life: Genetic Engineering Vanillin”

3rd Tie – Eden Vang, Sheldon High School, “Revolutionizing Agriculture with Aquaponics”

Honorable Mentions

- Anaya Smith, Sheldon High School, “Phloem Signals in Flowering Plants”
- Maily Vue, Sheldon High School, “Powerhouse Plants: The Secret Efficiency of C4 Photosynthesis”

Subcategory: Cellular Agriculture – Junior (Grades 6-9)

1st – Emory Ou, Pleasanton Middle School, “Developing Immortal BSCS for Sustainable Cultured Meat”

2nd – Anika Kumar, The Quarry Lane School, “Cellular Agriculture for Sustainable Seafood”

Subcategory: Cellular Agriculture – Senior (Grades 10-12)

1st – Janice Tao, Sheldon High School, “Cultivated Meat: Biotech’s Bite of the Future”

2nd – Ashley Tran, Pleasant Grove High School, “Making Ends Meat”

3rd Tie – Amy Huynh, Pleasant Grove High School, “Cellular Agriculture: The Rise of Cultivated Meats”

3rd Tie – Siddharth Pandey, Pleasant Grove High School, “Innovative Meat Alternatives: Sustainable Solutions to Address Global Population Growth”

Honorable Mentions

- Hong An Nguyen, Pleasant Grove High School, “Investigating the Development of Cultured Meat”
- Miley Zhang, Sheldon High School, “Using Biotech to Improve the Lives of Livestock - Animals: How We Can Help Them”

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Platform Tools and Technology:

Subcategory: Environmental Biotechnology – Junior (Grades 6-9)

1st – Taran Ciganehalli, Eleanor Murray Fallon Middle School, “Genetical Engineering on Cyanobacteria: How Can These Tiny Organisms Impact the World?”

2nd – Ryan Cho, Stratford Middle School, “Algae Biomass”

3rd Tie – Surya Bathini, Adams Middle School, “Algal Biofuels: New sustainable energy”

3rd Tie – Darsh Dhuvur, Foothill High School, “Fueling the Future: Microalgae for Oils and Transportation Fuels”

Subcategory: Environmental Biotechnology – Senior (10-12)

1st – Di Tu Chuong, Sheldon High School, “Turning the Tides: A Cleaner Ocean with Plastic-Eating Bacteria”

2nd Tie - Sudeeksha Ponnuru, Sheldon High School, “Turning the Tide on Excess Carbon: Can Genetically Modified Algae Make a Difference?”

2nd Tie – Mustafa Rashha, Sheldon High School, “Biotechnological Innovations of Carbon Capture Systems”

3rd Tie – Therese Abulencia, Pleasant Grove High School, “Winning as the Underdog: Using Bioremediation to Combat Environmental Pollution”

3rd Tie – Chidiebube Igbokwe, Sheldon High School, “The Sunflower Solution: Advancing Phytoremediation for Toxic Soil Cleanup”

Honorable Mentions

- Kiet Back, Sheldon High School, “Bioremediation – Pathway to Safe Ecosystems”
- Allie Cook, Pleasant Grove High School, “Phytoremediation: The Pollution Solution”
- Linh Dang, Sheldon High School, “BioBusters: Harnessing Bacteria to Fight Plastic Waste”
- Rupali Dosnjh, Sheldon High School, “From Waste to Sustainable Energy: Microbial Fuel Cells and the Future”
- Anna Duong, Sheldon High School, “PHA: The Bioplastic Material Made by Bacteria Utilized for a More Sustainable Way”
- Howie Ho, Sheldon High School, “Water We Doing? Provide Clean Drinking Water Through Water Desalination”
- Konon Kurashige, Algonquin Regional High School, “From Plastic to Oil: The Future of Recycling and Sustainability”
- Romeo Thao, Sheldon High School, “Rooting for the Earth: Bioengineering Plants to Combat Global Warming”
- Jamilla Velasco, Pleasant Grove High School, “Tiny but Mighty: Microbial Bioremediation”
- Jai Velukuru, The Quarry Lane School, “Bioluminescent Biosensors for Lead Detection: The Glowing Guardians of Water Safety”
- Marshelle Rose Yasay, Sheldon High School, “Microbial Engineering: Harnessing Microbes to Combat Climate Change”

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Platform Tools and Technology cont.:

Subcategory: Nanotech, Biomaterials, and Industrial Biotech – Junior (Grades 6-9)

1st – Srilakshmi Raghuram, Mission San Jose High School, “Crossing the Blood Brain Barrier”

2nd – Shyamaditya Madapathi, Flower Mound High School, “Sargassum Biomaterials: From Hinderance to Helpful”

3rd – Matthew Yang, Amador Valley High School, “Alkaliphiles in Biotechnology”

Honorable Mentions

- Arfan Anilash, Emerald High School, “DNA Origami: Constructing Nanoscale Devices with Molecular Precision”

Subcategory: Nanotech, Biomaterials, and Industrial Biotech – Senior (Grades 10-12)

1st Tie – Hiya Banerjee, Pleasant Grove High School, “Branching Out: The Multifunctional Polymers Revolutionizing Nanotechnology”

1st Tie – Krystal Sin, Sheldon High School, “Revolutionizing the World with Nanoparticles and Tea”

2nd Tie – Gilianne Agar, Sheldon High School, “Getting to the Point with Nanodiagnostic Point-of-Care Systems”

2nd Tie – Kaitlyn Yang, Sheldon High School, “Earth’s Shield: Biodegradable Band-Aids”

3rd Tie – Tejas Nandi, Arcadia High School, “Biomimetics – The World We Know, Through Nature”

3rd Tie – Arwen Shah, Greenwood High School, “The Lotus Effect: Crafting Cleanliness Through Biomimetics”

Honorable Mentions

- Isabella D’Augustine, Franklin High School, “Cellulose Digestibility Unlocked” CRISPR – Enhanced Enzymes to Break Beta Bonds”
- Noor Gowra, California High School, “DNA Origami, Crafting with the Blueprint of Life”
- Oscar Li, Quarry Lane School, “Xenobots: Evolutionary Heart Tissue Regeneration After a Heart Attack”
- Shiyong Pei, Sheldon High School, “Nanorobotics in Medicine”
- Naina Rana, Quarry Lane School, “Genetic Modification of Probiotics to Counteract Lactose Intolerance”

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Platform Tools and Technology cont.:

Subcategory: Computational Biology & Genomics – Junior (Grades 6-10)

1st – Samik Chaudhry, Foothill High School, Machine Learning's Applications to Biology"

2nd – Anya Gangineni, Cottonwood Creek, "Bioinformatics in Early Cancer Detection"

3rd – Vaishnavi Varma, Vista del Lago High School, "Life's Blueprint: Comparing Genomes"

Honorable Mentions

- Aditya Khurd, Stratford Middle School, "Gut Microbiome Simulation"

Subcategory: Computational Biology & Genomics – Senior (Grades 10-12)

1st – Iris Zheng, The King's Academy, "AlphaFold Cracks: The Protein-Folding Case"

2nd Tie – Ashleen Maharaj, Sheldon High School, "Bringing Back the Extinct Using CRISPR and Gene Cloning"

2nd Tie – Alekhya Nallagangu, Vista del Lago High School, "AlphaFold: Prediction of Protein Structure with AI"

3rd Tie – Noah Thai Ariola, Pleasant Grove High School, "Biotechnology Meets AI: The Impact of Neural Networks on Genomics"

3rd Tie – Apurva Sistla, Lynbrook High School, "CRISPR and AI: The Dynamic Duo Refining Gene Editing"

Honorable Mentions

- Nachiket Bidarkundi, Foothill High School, "Hologenomics – Redefining Evolution"
- Jacob Borlak, Pleasant Grove High School, "Neural Networks: Predicting Cancer Treatment Outcomes"
- Danny Bui, Sheldon High School, "The Future of Healthcare: AI in Personalized Medicine"
- Orchita Chakraborty, Straford Preparatory High School, "Synapses in Cloud – The Virtual Brain & Alzheimer's"
- Heidy Feng, Sheldon High School, "Discover (GenBank)"
- Niveta Sree Gunda, Mountain House High School, "Is AI-Driven Genome Editing the Future?"
- Yash Jayesh Laddha, Greenwood High School, "AlphaFold: AI-Powered Revolution in Protein Structure Prediction"
- Madhubala Mohanakrishnan, Ridge High School, "Redefining Life with Gene Editing"

TBC 2025 WINNERS

Human & Animal Health:

Subcategory: Biomedical Engineering and Regenerative Medicine – Junior (Grades 6-9)

1st – Bharghav Soma, Amador Valley High School, “Biobots: Cellular Machines for Medicine and More”

2nd Tie – Anaya Bhattacharyya, Vista del Lago High School, “Your Switching is Swell, Stem Cells!”

2nd Tie – Tanushri Ciganehalli, Eleanor Murray Fallon Middle School, Electrospun Fibers in Tissue Engineering

3rd – Ahroon Bhalla-Levine, Dublin High School, “The Evolution of Prosthetic Hands”

Honorable Mentions

- Ishanvi Bala, Dougherty Valley High School, “iPSCs: Cells Travel into the Past”
- Aditi Rajidi, Stratford Middle School, “STEM Cell Therapy: Regrow Human Organs to Heal Injuries”
- Parth Shukla, Livingston High School, “From Mind to Limb: Prosthetics Controlled by the Nervous System”
- Aydin Soner, Ubuntu Nation Builders Academy (homeschool), “Advancements in Regenerative Dentistry: Applications of Dental Pulp STEM Cells (DPSC's)”

Subcategory: Biomedical Engineering and Regenerative Medicine – Senior (Grades 10-12)

1st Tie – Tram Nguyen, Sheldon High School, “Future of Stem Cells: The Missing Piece in Alzheimer's Treatment”

1st Tie – Amun Wedderburn, Sheldon High School, “Organs-on-Chips: The Future of Drug Testing and Personalized Medicine”

2nd Tie – Malia Ann Gomez, Sheldon High School, “Artificial Wombs: A Future of Sustaining Life”

2nd Tie – Joanne Huang, Sheldon High School, “Beyond Glasses: The Future of Implantable Collamer Lenses”

2nd Tie – Jody Su, Sheldon High School, “Myoelectric Prostheses: Merging Man and Machine”

3rd Tie – Maximiliano Gonzalez-Martinez, James C. Enochs High School, “Reality or Science Fiction? A Peak into the Future: Brain Computer Interfaces”

3rd Tie – Andrew Le, Sheldon High School, “The Future of Bones: 3D Printing in Orthopedics”

Honorable Mentions

- Harnoor Jhaji, Sheldon High School, “Nano-Printed Blood Vessels: The Key to 3D-Printed Organs and Lifesaving Transplants”
- Gabriela Konde, George Marshall High School, “From Scars to Skin: Stem Cell Therapies in Burn Recovery”
- Jacob Le, Sheldon High School, “From Brainwaves to Breakthroughs: The Rise of Brain-Computer Interfaces”
- Quynh Le, Sheldon High School, “Cryonic: Escaping Death”
- Yash Mahi, Sheldon High School, “3D Bioprinter: Printing Organs to Save Lives”
- Jaisleen Halhi, Sheldon High School, “Synthetic Lifeline: The Future of Lab-Grown Blood & Artificial Transfusions”

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Human & Animal Health cont.:

- Ammaar Mustafa, Sheldon High School, "Brain-Computer Interfaces (BCI); New Possibilities for the Paralyzed"
- Samrita, Rio Americano High School, "Seeing the Future: Advances in Stem Cell Therapy"
- Calista Pham, Sheldon High School, "Building a Better Body, 3D Printed Organs"
- Ray Rishab, Foothill High School, "Armed with Innovation: A Low-Cost Prosthetic Solution"
- Ella Trieu, Pleasant Grove High School, "Biodiversity in Prosthesis: From the Ground to the Body"

Subcategory: Diagnostics, Drugs, Vaccines, and Treatments – Junior (Grades 6-9)

1st – Liv Harrington, Atkins High School, "Atherosclerosis: The Cardiac Killer and the Promising Path to a Cure"

2nd – Tzu-Chi Yang, Stratford Middle School, "Keratin-based Bandages for Chronic Wounds"

3rd – Aisha Hanif, Foothill High School, "Immunology in the Age of COVID 19"

Honorable Mentions

- Abiya Jaleeza Azif, Mountain House High School, "Brain Microbiome Theory"
- Anya Kasturi, Innovation Academy, "Gut Galaxy: Microbes and Autoimmune Diseases"

Subcategory: Diagnostics, Drugs, Vaccines, and Treatments – Senior (Grades 10-12)

1st Tie – Bhavya Dwivedi, Emerald High School, "A Coupled HPA-Mirror Neuron Model of Chronic Maternal Stress and Autism Susceptibility"

1st Tie – Thyda Sokunn, Sheldon High School, "Breaking Barriers: Exploring New Horizons in Post-Breast Cancer Treatment"

2nd Tie - Ava Allen, Sheldon High School, "Hope, Healing, and Strength: Empowering Every Step in Ovarian Cancer Care"

2nd Tie – Avijay Sen, Franklin High School, "Microbiome-Based Biomarkers for Cancer: A New Era of Early Detection"

3rd Tie – Josh Ireland, Sheldon High School, "The Future of Pharmacy: 3D Printing Personalized Medications"

3rd Tie – Mee Vang, Pleasant Grove High School, "Vaccines for Immune Tolerance Against Autoimmune Diseases"

Honorable Mentions

- Keahna Chao, Sheldon High School, "Virtual Reality for Pain Management: A High-Tech Alternative to Traditional Anesthetics"
- Timothy Hwang, Davis Senior High School, "The Usage of mRNA Vaccine for Cancer Treatment"
- Chidinma Igbokwe, Sheldon High School, "Planting the Seeds of Immunity: Edible Vaccines and Biotechnology"

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Human & Animal Health cont.:

- Jessica Liao, Amador Valley high School, “Nanovaccines: Promising Advancements in Immunization”
- Colsen, Nguyen, Christian Brothers High School, “Revolutionizing Early Detection of Cancer with a Simple Blood Test”
- Nia Ou, Amador Valley High School, “Containing the Spread of Bird Flu: To Vaccinate or Not?”
- Tanish Shirolkar, Vista Del Lago High School, “Tumor Infiltrating Lymphocytes: The Body's Own Fighting Machine!”
- Noor Sidhu, Granite Bay High School, “TMS: Revolutionizing Treatment in Psychiatry”
- Kaylee, Tran, Sheldon High School, ““Cheerio!” - Finally Saying Goodbye to Celiac Disease?”
- Ramonda Zaiya, James C. Enochs High School, “The Effects of Psoriasis on the Immune System and Ultraviolet Light Curing”
- Jeannie Zhang, Pleasant Grove High School, “The Usage of Vaccines to Treat Chronic Diseases”

Subcategory: Personalized Medicine and Gene Therapies – Junior (Grades 6-9)

1st – Amel Ben Haj, Harper Junior High, “Can Personalized Medicine Targeting Epigenetic Abnormalities Cure Breast Cancer?”

2nd – Roy Shih, Oliver Wendell Holmes Junior High, “Translating Science into Care: Genetics and FDA Action”

3rd - Jiyul Kim, Stratford Middle School, “Cancer vs. the Immune System”

Honorable Mentions

- Sahil Ganapa, Foothill High School, “The Uprise of Biotech in Curing Thyroid Hormone Disorders”
- Lucas Inderbitzin, Oliver Wendell Holmes Junior High School, “APOE4 Gene: The Effects of Developing Alzheimer's”
- Ridhan Randeri, The Irvington High School, “Sickle Cell Disease and Gene Therapy”

Subcategory: Personalized Medicine and Gene Therapies – Senior (Grades 10-12)

1st – Nehal Revuri, Dublin High School, “Synthetic Anti-Cancer Soldiers: Unlocking the Potential of CAR T-cell Therapy”

2nd Tie – Zion Cooper, Sheldon High School, “Ocular Gene Therapy”

2nd Tie – Ciereann Xiong, Sheldon High School, “Uncommon but Unforgotten: Advancing Orphan Drug Development for Rare Diseases”

3rd – Hansika Kolli, Vista Del Lago High School, “Breaking the ‘One-Size-Fits-All’ Barrier: Unlocking a Cancer-Free Future with Pharmacogenetics”

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Human & Animal Health cont.:

Honorable Mentions

- Nikolas Bagesse, Franklin High School, "Epigenetics: A New Frontier in Muscular Sclerosis Research"
- Aida Cooney, The Urban School of San Francisco, "Sickle Cell Anemia: Gene Therapy"
- Tracy Ho, Sheldon High School, "Pharmacogenomics: Tailoring Drug Therapy through Biotech Innovations"
- Shae Honda-Scully, Christian Brothers High School, "Harnessing Epigenetic Modifications for Enhancing Stress Resilience and Mental Health"
- Siddarth Iyer, The Quarry Lane School, "CRISPR Wearables: The Future of Genetic Disease Management"
- Savannah Padilla, Enochs High School, "Epigenetics: The Future of Medicine"
- Jiya Pai, Academy of the Canyons, "Combating Preterm Birth Statistics with CRISPR Cas-9 Genome Engineering"
- Hervy Jazlyn Pichay, Sheldon High School, "Precision Medicine: Going Beyond One-Size-Fits-All Treatment"
- Ethan Sam, Sheldon High School, "Reprogramming Cancer Cells: The Potential to Restore Tumors to Healthy Tissue"
- Anika Tenneti, Dougherty Valley High School, "Antisense Therapy: A Novel Approach to Rare Neurological Conditions"
- Sage Vang, Sheldon High School, "A Breakthrough in Cancer Treatment"
- Helen Zhang, Davis Senior High School, "Fighting Cancer with CRISPR/Cas9: Seek and Destroy"