



****Press Release****

****Strict Embargo: Friday, May 12, 2006, 10:00 A.M. Eastern Standard Time****
****DO NOT RELEASE UNTIL THIS TIME****

Government and College Scholarship Awards presented to Finalists of the Intel International Science and Engineering Fair 2006 Presented by Agilent Technologies

Indianapolis, Indiana, USA -- Science Service, in partnership with the Intel Foundation this morning presented awards at the Government and College Scholarship Awards Ceremony sponsored by Science News at the Intel International Science and Engineering Fair 2006 (Intel ISEF). Student winners are ninth through twelfth graders who earned the right to compete by winning top prize at a local, regional, state or national science fair. The awards presented by governmental and educational organizations include scholarships, summer internships, book and equipment grants and scientific field trips.

The International Science and Engineering Fair is sponsored by Intel and has been administered by Science Service since its inception in 1950. Science Service is a non-profit organization dedicated to advancing the understanding and appreciation of science among people of all ages.

This information will be posted on the Science Service website at www.sciserv.org/isef immediately following the ceremony.

Office of Naval Research on behalf of the United States Navy and Marine Corps

Tuition Scholarship Award in the amount of \$8,000

BE006

Working Memory Interference Effect on Visual ERP's

Mary Margaret Brinkopf, 17, Canterbury School, Fort Myers, Florida

BI036

Ethanol Production in Bluestem Grass

Allison Ruth Wilson, 17, West Central Valley High School, Stuart, Iowa

- BO045 **The Investigation of Natural Alternatives for *Phaseolus vulgaris* Production**
Michael Louis Ginsbach, 18, Hankinson High School, Hankinson, North Dakota
- CH057 **The Influence of Reference Power on Calorimetrically Determined Thermodynamic Parameters**
Sara D. Niedbalski, 17, Marian High School, Mishawaka, Indiana
- CS041 **Three-dimensional Face Recognition from Video: Facial Surface Reconstruction and Analysis Using Tensor Algebra and Differential Geometry**
Justin Moore Solomon, 18, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia
- EA010 **Measuring Long Term Trends in the San Francisco Bay Delta Using Satellite Imagery**
Mina Renee Bionta, 18, Livermore High School, Livermore, California
- EN134 **Preparation and Characterization of a Superparamagnetic Polymer Nanocomposite for Biomedical Applications**
Nicole Rachelle Brenner, 18, Lawrence High School, Cedarhurst, New York
- EV007 **Evaluating the Synergistic Effects of Lead, Cadmium, Zinc, and Manganese on Selected Cellular Models**
Kristen Elaine Fenska, 18, Miami High School, Miami, Oklahoma
- MA032 **On the Reducibility of Cyclotomic Polynomials Over Finite Fields**
Brett Alexander Harrison, 17, Half Hollow Hills High School West, Dix Hills, New York
- ME090 **That Little Voice Inside Your Head**
Erin Marie Fischell, 18, High Technology High School, Lincroft, New Jersey
- MI050 **Use of GFP to Analyze *Pseudomonas syringae* pv. *phaseolicola* 1448A in Plant Cells**
Daniel Abraham Blumenthal, 18, Jones College Preparatory School, Chicago, Illinois
- PH048 **Sensitivity of 1/f Noise to Chemical Constituents: A Study of Pentacene and Its Oxidative Impurity in Thin-Film Transistors**
Winston Xia Yan, 17, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia
- SP005 **Implementing a Novel Program for Forecasting Latitude/Longitude Locations and Movement Rates of Sunspots and Active Solar Magnetic Regions, Year Three**
Elyse Autumn Hope, 18, Oregon Episcopal School, Portland, Oregon
- ZO003 **Biological Control of a Common Corn Criminal, Phase Three: The Effects of Entomogenous Nematodes on the *Carpophilus dimidiatus*, Corn Sap Beetle**
Douglas Ray Horton, 17, Hotchkiss High School, Hotchkiss, Colorado
- Tuition Scholarship Award of \$8,000 for original research in an important Naval-relevant scientific area**
MI016 **Comprehensive Bacterial Identification and Analysis Software: Protecting the Armed Forces and Improving Health Care Worldwide**
Benjamin Albert Schwank, 18, James Madison High School, Vienna, Virginia

PH002 **A Compact Approach for the Real-time 3D Localization of Sounds**
David S. Holz, 17, Monarch High School, Coconut Creek, Florida

PH015 **Synthetic Depth of Focus**
Holly Kristine Zelnio, 18, Chaminade Julianne High School, Dayton, Ohio

Team Tuition Scholarship Award in the amount of \$8,000 to be equally divided between the team members

ME326 **Dystrophic Skeletal Muscle Cell Membranes Patched by Ploxamer 407**
Lalith Kumar Polepeddi, 17, Cherry Creek High School, Greenwood Village, Colorado
Michael McCord Polmear, 18, Cherry Creek High School, Greenwood Village, Colorado

Scholarships are payable at \$2,000 a year for four years. Recipients also receive a certificate signed by the Chief of Naval Research and the Vice Chief of Naval Research, and a U.S. Navy memento. Team award winners receive \$1,000 a year for four years.

United States Air Force

First Award of \$3,000

BE029 **Word Segmentation in Language Acquisition: Assessing Ambiguities Between Word Offsets and Transitional Probabilities**
Riana Juhn Betzler, 17, The Fox Lane High School, Bedford, New York

BI036 **Ethanol Production in Bluestem Grass**
Allison Ruth Wilson, 17, West Central Valley High School, Stuart, Iowa

BO028 **Free Radical Inhibition and Alleviation by Antioxidants to Prevent Agricultural Devastation from Unfavorable Environmental Conditions with the *Lycopersicon esculentuma***
Justin Andrew Townley, 17, Okaloosa-Walton College Collegiate High School, Niceville, Florida

CH043 **Development of an Improved Oxygen Sensor: Incorporating a Tris-bipyridyl Ruthenium(II) Dye into a Sub-wavelength Optical Cavity**
Jasmine M. Gregory, 16, Harry P. Harding High School, Charlotte, North Carolina

CS032 **A Study on the Design and Implementation of an Artificially Intelligent Control System**
Sagar Indurkha, 16, North Carolina School of Science and Mathematics, Durham, North Carolina

EA004 **ENSO Dampening of Atlantic Tropical Cyclone Activity via Thermal Wind**
Alexander Abram Robel, 17, Maritime and Science Technology Academy, Miami, Florida

EN067 **Telescopic Morphing Wings: Design-Build-Fly**
Stephen Gerald Warrenner, 18, East Noble High School, Kendallville, Indiana

EV119 **Pyrethroids as Endocrine Disruptors: The Effect of Residual Pyrethroid Levels as Found in *L. esculentum* (Tomatoes) on the Abnormal Proliferation of MCF-7 Human Breast Cells**
Graham William Wakefield Van Schaik, 16, Spring Valley High School, Columbia, South Carolina

- MA028 **The Evolution of Operant Conditioning and Cooperation in Delayed Gratification Games**
Benjamin Scott Hamner, 18, Academic Magnet High School, North Charleston, South Carolina
- ME009 **Chloroplast Genetic Engineering: A Novel Method to Produce Therapeutic Proteins**
Shiv Mukesh Gaglani, 17, West Shore High School, Melbourne, Florida
- MI016 **Comprehensive Bacterial Identification and Analysis Software: Protecting the Armed Forces and Improving Health Care Worldwide**
Benjamin Albert Schwank, 18, James Madison High School, Vienna, Virginia
- PH020 **Development of an Inexpensive Raman System and a Littrow Spectrograph**
Mary Masterman, 16, Westmoore High School, Oklahoma City, Oklahoma
- SP010 **Earth Eclipse Effect on GPS Satellite Orbits**
Daniel Kaleonahe Apau Jachowski, 17, West Potomac High School, Alexandria, Virginia
- ZO022 **A Device for Determining the Gender of Salmon Using Morphological Characteristics, Phase Four: Age & Morphological Differences Between Male & Female Kokanee Salmon**
Susannah Lee Clary, 14, Los Lunas High School, Los Lunas, New Mexico

Second Award of \$1,500

- BE042 **The Cognitive and Emotional Factors that Impact an Individual's Likelihood to Use Alternative Energy**
Allison Erica Dender, 17, Plainview Old-Bethpage John F. Kennedy High School, Plainview, New York
- BI027 **Comparing Mitochondrial DNA Through Electrophoresis and DNA Terminator Sequencing**
Isaac Michael Ketcham, 14, Farmington High School, Farmington, New Mexico
- BO042 **Design of a Novel Wave Reactor for *in situ* Culturing of *Chlamydomonas reinhardtii*, Phase I: Effect of Wave Mixing**
Caroline Janet Lang, 14, Independence Home School, Yardley, Pennsylvania
- CH038 **A Study Involving the Synthesis of Carbon Nanotube Filters in the Macroscale with Experiments Concerning the Effectiveness of Metal-Derived Catalysts: A Continuation**
Jennifer Lee Nagel, 18, Dekalb High School, Waterloo, Indiana
- CS019 **Java Based Algorithm Automated Prescription Reminder and Renewal**
Nadia N. Naja, 17, Dearborn Center for Math, Science & Technology, Dearborn Heights, Michigan
- EA011 **An Estimation of Heavy Metal Contamination in Soil Using Reflectance Spectroscopy and Partial Least Squares Regression**
Caaminee Mayank Pandit, 18, Noblesville High School, Noblesville, Indiana
- EN009 **What Effects Do Leading Edge Tubercles Have on Hydrofoil Characteristics?**
Mark Richard Fleming, 15, Loyola High School, Mankato, Minnesota

- EV013 **Harvesting Energy from Wastewater in a Two-chamber Microbial Fuel Cell**
Sikandar Singh Porter-Gill, 15, Gaithersburg High School, Gaithersburg, Maryland
- MA015 **Extended Fault Tolerance of Hyper-star Graphs**
Meelap Vijay Shah, 17, Stoney Creek High School, Rochester Hills, Michigan
- ME026 **Nanotechnology, Phase II: Development of a Nanoparticle-based Sensor to Detect a Cancer Biomarker**
Gina Elisabeth Paietta, 16, Carroll High School, Dayton, Ohio
- MI040 **Investigation of Eye Infections: Bacterial Adherence vs. Contact Polymer Type and the Antibiotic Properties of Contact Solutions**
Katie Joan Nix, 14, Grove High School, Grove, Oklahoma
- PH026 **Cracking the Brazil Nut Effect**
Meredith Ann MacGregor, 17, Fairview High School, Boulder, Colorado
- SP001 **The Effect of Space Shuttle Launch Induced g-forces on Soybean Seeds Planted in a Lunar Simulated Soil Treated with Bio-solid: Degree of g-force/Length of Exposure Time**
Rachel Jean Lisson, 17, Cloquet High School, Cloquet, Minnesota
- ZO070 **Cell Proliferation Is Episodic and Pulsatile During Growth of Zebrafish Fins**
Isha Himani Jain, 15, Freedom High School, Bethlehem, Pennsylvania

Team Award of \$1,500 for each member

- PH313 **Factors Affecting the Tribological Properties of Carbon Nanotubes**
Tirth Tarang Patel, 17, Spruce Creek High School, Port Orange, Florida
Byron Henry Lowry, 17, Spruce Creek High School, Port Orange, Florida

Team Award of \$1,000 for each member

- EN331 **Polycaprolactone-Chitosan Nanocomposite Biomaterials for Wound Healing and Tissue Engineering**
Wilfred Chung-Him Wong, 17, Herricks Senior High School, New Hyde Park, New York
Ashish Mohan Bakshi, 17, Manhasset High School, Manhasset, New York

Each winner will receive a plaque and a certificate of recognition; the teacher of each individual and team project will receive a grant in the amount of \$300.

United States Army

Award of three \$1,000 U.S. Savings Bonds, a certificate of achievement and a gold medallion.

- BE033 **The Impact of Individual Religious Commitment on Academic Achievement, Hope and Quality of Life in Adolescents**
Sarah Batya Joselow, 17, Ossining High School, Ossining, New York
- BI076 **Kinetic Characterization of Inosine-5'-monophosphate Dehydrogenase**
Taylor Currie Stevenson, 17, Louisiana School for Math, Science and the Arts, Natchitoches, Louisiana

- BO022 ***M. sativa*, a Sustainable and Natural Technique for the Remediation of Heavy Metal Contamination**
Keely Ann Goodgame, 17, San Jon High School, San Jon, New Mexico
- CH025 **A Novel Chlorophyll-based Nanocrystalline Photoelectrochemical Cell: A Promising Approach to Hydrogen Production via the Light-driven Redox of Seawater**
Nilesh Tripuraneni, 15, Clovis West High School, Fresno, California
- CS039 **The Effects of Refrigerant-cooled Oil Submersion on the Performance of a Central Processing Unit in a Computer**
Brock Anderson Hinig, 16, Tuscarawas Valley High School, Zoarville, Ohio
- EA011 **An Estimation of Heavy Metal Contamination in Soil Using Reflectance Spectroscopy and Partial Least Squares Regression**
Caaminee Mayank Pandit, 18, Noblesville High School, Noblesville, Indiana
- EN048 **Nanoengineering Aerogel for Insulin Insulation**
Alex Nathan Capecelatro, 18, Brewster High School, Brewster, New York
- EV019 **Boards and Branches, Year Five: A Continued Multivariable Study of Snow Interception for Water Conservation**
Erica Elizabeth David, 16, Pinedale High School, Pinedale, Wyoming
- MA026 **Discrete Dynamical Systems in Directed Graphs**
Jeff D. Nanney, 17, Plano East Senior High School, Plano, Texas
- ME071 **A New Target to Fight Breast Cancer: hHb1-AN**
Melissa Victoria Sussman, 17, Lawrence High School, Cedarhurst, New York
- MI026 **The Relative Sensitivity of Fungal Mycelium to Allelopathic Chemicals Produced by Noxious Weeds**
Angela Roberta Tomscheck, 17, North Toole County High School, Sunburst, Montana
- PH048 **Sensitivity of 1/f Noise to Chemical Constituents: A Study of Pentacene and Its Oxidative Impurity in Thin-Film Transistors**
Winston Xia Yan, 17, Thomas Jefferson High School for Science and Technology, Alexandria, Virginia
- SP008 **The Titan Blimp**
John Thomas Hagen, 18, Ayersville High School, Defiance, Ohio
- ZO022 **A Device for Determining the Gender of Salmon Using Morphological Characteristics, Phase Four: Age & Morphological Differences Between Male & Female Kokanee Salmon**
Susannah Lee Clary, 14, Los Lunas High School, Los Lunas, New Mexico

Award of three \$1,000 U.S. Savings Bonds, to be shared equally by team members, and certificates of achievement and gold medallions.

- CS311 **Parabolic Dish Receptors: Increasing Wireless Internet Connection Strength and Stability**
Brian Jonathan Cain, 16, The Villages Charter High School, The Villages, Florida
Ross Anthony Mittiga, III, 17, The Villages Charter High School, The Villages, Florida

Winners receive an all expense paid trip to Operation Cherry Blossom in Tokyo, Japan. Each trip winner will also receive three \$1,000 U.S. Savings Bonds, \$300 from the Association of the United States Army, a gold medallion and a certificate of achievement.

BO026 **Organic Mendel: A Genetic Comparison of Organic and Inorganic Plants**
Carla Jane Harper, 17, Del Rio High School, Del Rio, Texas

EN134 **Preparation and Characterization of a Superparamagnetic Polymer Nanocomposite for Biomedical Applications**
Nicole Rachelle Brenner, 18, Lawrence High School, Cedarhurst, New York

Alternate for the Operation Cherry Blossom trip to Tokyo, Japan

BE033 **The Impact of Individual Religious Commitment on Academic Achievement, Hope and Quality of Life in Adolescents**
Sarah Batya Joselow, 17, Ossining High School, Ossining, New York

One all expense paid trip to London International Youth Science Forum, three \$1,000 U.S. Savings Bonds, \$300 from the Association of the United States Army, a gold medallion and certificate of achievement.

CH043 **Development of an Improved Oxygen Sensor: Incorporating a Tris-bipyridyl Ruthenium(II) Dye into a Sub-wavelength Optical Cavity**
Jasmine M. Gregory, 16, Harry P. Harding High School, Charlotte, North Carolina

Alternate to attend the London International Youth Science Forum

CS039 **The Effects of Refrigerant-cooled Oil Submersion on the Performance of a Central Processing Unit in a Computer**
Brock Anderson Hinig, 16, Tuscarawas Valley High School, Zoarville, Ohio

United States Coast Guard

For projects that relate to boating and water safety.

First Award of \$5,000

EN096 **Hypo Hoist**
Tanya Louise Budd, 18, Waingels College, Reading, Berkshire, United Kingdom

Second Award of \$3,000

CH016 **Optimizing a Catalyst for Elimination of Carbon Monoxide Exhausted from Gas Water Heater**
Chen Wei Tsai, 16, The Affiliated Senior High School of NKNU, Kaohsiung, Taiwan, Chinese Taipei

Third Award of \$1,000

EV090 **Utilizing Ultrasonic Activation to Prevent the Adhesion of the *Balanus glandula* Within the Maximum Radius**
Ryan John Clark, 16, Hilton Head Preparatory School, Hilton Head Island, South Carolina

Fourth Award of \$500

EA012 **Identification of Conditions that Affect the Resolution of the Global Positioning System (GPS)**
Natasha Hasbah Gail, 17, Rough Rock Community School, Chinle, Arizona

Honorable Mention Award of \$100

- CH069 **The Effect of Various Anti-Corrosive Methods on the Corrosion Process of Iron**
Gina A. Noh, 15, Spring Valley High School, Columbia, South Carolina
- PH051 **Microbial Cells and Corrosion Prevention**
Mary Katherine Soltys, 17, Notre Dame Academy, Park Hills, Kentucky
- SP010 **Earth Eclipse Effect on GPS Satellite Orbits**
Daniel Kaleonahe Apau Jachowski, 17, West Potomac High School, Alexandria, Virginia

Department of Homeland Security, University Programs Office

Four individual and two team \$20,000 portable undergraduate scholarships, in all of the Intel ISEF categories. A recipient must be a U.S. citizen and agree to major in science, math, engineering or technology. The Department of Homeland Security (DHS) is particularly interested in projects where there is a connection with the mission of DHS. This mission is to prevent and deter terrorist attacks and protect against and respond to threats and hazards to the nation. DHS will ensure safe and secure borders, welcome lawful immigrants and visitors, and promote the free-flow of commerce.

Scholarship Award of \$20,000

- BE049 **Gender Differences in Rationality: A Study of If and Why Genders Differ in How Closely They Adhere to the Theory of Rational Behavior**
Marshall Bradley Everett, 17, Shoals Christian School, Florence, Alabama
- CS309 **Using Eulerian Models to Determine Initial Conditions of Severe Weather**
Gwyneth Rhiannon Glissmann, 15, Peak to Peak Charter School, Lafayette, Colorado
Robert Vaughan Glissmann, 18, Peak to Peak Charter School, Lafayette, Colorado
- EN030 **Indoor Firefighter Location**
Matthew Zubiell, 15, Lewis-Palmer High School, Monument, Colorado
- EV313 **A Simulative Study of the Exxon Valdez Oil Spill and Its Detrimental Effects on Marine Organisms as Determined by the Bioluminescent Capabilities of the Dinoflagellate**
Cole Thomas Streiff, 18, Oregon Episcopal School, Portland, Oregon
Matthew Aaron McKinney, 18, Oregon Episcopal School, Portland, Oregon
- ME013 **Engineering of a Novel Inhibitor of Biofilm-Encapsulated Pathogens**
Madhavi Pulakat Gavini, 16, Mississippi School for Mathematics & Science, Columbus, Mississippi
- PH015 **Synthetic Depth of Focus**
Holly Kristine Zelnio, 18, Chaminade Julianne High School, Dayton, Ohio

Team scholarship will be equally divided among team members

National Oceanic and Atmospheric Administration - NOAA

"The Pulse of the Planet" award will be awarded to the students whose projects best relate to NOAA's mission goals. These students will receive a choice of a fully paid internship at a NOAA research lab, an opportunity to work with researchers on a NOAA vessel at sea, OR a research field experience at a National Marine Sanctuary. The winners will also receive a certificate signed by the Under Secretary of Commerce for Oceans and Atmosphere.

A fully paid summer internship at a NOAA research lab, an opportunity to work with researchers on a NOAA vessel at sea OR a research field experience at a National Marine Sanctuary.

- EA001 **Storm Warning: Is There a Predictable Correlation Between the North Atlantic Oscillation and Tropical Cyclone Activity?**
John Christopher Turner, 17, Lincoln High School, Tallahassee, Florida
- EV115 **Effectiveness of Strobe Lights, Sound Frequency, and Lasers in Reducing Salmon Entrapment Through Hydropower Turbines**
Alexa A. Carey, 17, Gold Beach High School, Gold Beach, Oregon
- ZO034 **Coral Bleaching Adaptation**
Malcolm Bruce Young, 17, Centaurus High School, Lafayette, Colorado

A stipend, travel and housing allowance will be provided.

Indiana University

Partial tuition scholarships in the following categories: Behavioral and Social Sciences, Biochemistry, Botany, Chemistry, Computer Sciences, Earth Science, Space Science, Environmental Sciences, Mathematics, Medicine and Health, Microbiology, Physics and Zoology.

Tuition Scholarship Award of \$5,000 per year for 4 years for a total value of \$20,000

- BE010 **Testing Social Contract Theory in Structured and Unstructured Societies**
Edie Marie Uyesugi, 17, Paoli Junior-Senior High School, Paoli, Indiana
- BI016 **The Effects of the Iron Specific Chelator, Salicylaldehyde Isonicotinoyl Hydrazone, in Providing Protection to PC3 Cells Exposed to Cesium Radiation**
Zachary Carter Strickland, 17, Christian Academy of Louisville, Louisville, Kentucky
- BO033 **Dented and Damaged**
Jeremiah Wayne Corrigan, 17, Southeastern High School, Augusta, Illinois
- CH057 **The Influence of Reference Power on Calorimetrically Determined Thermodynamic Parameters**
Sara D. Niedbalski, 17, Marian High School, Mishawaka, Indiana
- CS020 **Viability of an Alternative Linking Algorithm**
Jonathan J. Pezzino, 17, Nicolet High School, Glendale, Wisconsin
- EA009 **Impact of Emerging Arctic Ground Cover upon Albedo and the Acceleration of Global Warming**
Krista BreAnn Pfeifer, 17, Latta High School, Ada, Oklahoma

- EV038 **Evaluation of Diatomaceous Earth Combined with Pyrethrin to Control *Rhizopertha dominica* in Stored Wheat**
Abigail Marie Hines, 16, Orchard Day School, Fort Wayne, Indiana
- MA026 **Discrete Dynamical Systems in Directed Graphs**
Jeff D. Nanney, 17, Plano East Senior High School, Plano, Texas
- ME092 **Mutagenic Effect of Tobacco on Microorganisms**
Sameem S. Qazi, 16, Carman-Ainsworth High School, Flint, Michigan
- MI008 **Environmental Bacteriophages: A Third Year Study of Bacteriophage Genomes**
Kyle Alexander Wallace, 18, John Jay Science and Engineering Academy, San Antonio, Texas
- PH040 **The Effect of AC Frequency on the Electrical Properties of a YBa₂Cu₃O₇ High Temperature Superconductor**
Jonathan Joseph Naber, 16, Waterloo High School, Waterloo, Illinois
- SP014 **Radio Interferometry Using 2 NASA RadioJOVEs at 20.1 MHz with Software Implementation in Java**
Hieu Huu Tran, 16, Southside High School, Greenville, South Carolina
- ZO023 **BDNF Regulates Taste Bud Development at Late Embryonic Ages**
Amanda Lynn Driskell, 17, Ballard High School, Louisville, Kentucky

Indiana University-Purdue University Indianapolis

Scholarships in the amount of \$5000 per year for four years.

\$5000 per year for four year scholarships.

- BE018 **The Ability to Recall: Male vs. Female**
Hannah Elizabeth Reid, 16, Upper Sandusky High School, Upper Sandusky, Ohio
- BI023 **A Comparative Analysis of Quantum Dot Nanotechnology and Standard Fluorophores**
Zane Sami Hatahet, 15, Divine Child High School, Dearborn, Michigan
- BO003 **The Lean Green Soybean Machine**
Hannah Ruth Cox, 15, Zane Trace High School, Chillicothe, Ohio
- CH009 **A Comparative Study of Heavy Metals Found in Fertilized and Non-fertilized Soils of Southern Indiana**
Jessica Lee Jackson, 16, Eastern High School, Pekin, Indiana
- CS039 **The Effects of Refrigerant-cooled Oil Submersion on the Performance of a Central Processing Unit in a Computer**
Brock Anderson Hinig, 16, Tuscarawas Valley High School, Zoarville, Ohio
- EA003 **Breakthrough Substitutions of Synthetic Polymers with Natural Chitosan for the Prevention of Soil Erosion**
Dhanur Damodar, 15, duPont Manual Magnet High School, Louisville, Kentucky

- EN121 **Development of a Functional Knee Brace for Patients with Medial or Lateral Compartment Syndrome Caused by Osteoarthritis**
Andrea Lynn Sims, 15, Mecosta Osceola Math Science Technology Center, Big Rapids, Michigan
- EV046 **Replacing Petroleum Fuel with Alcohol Blended with Orange Oil and Pine Oil**
Raymond Tan, 14, William Mason High School, Mason, Ohio
- EV310 **The Effect of Antibiotics on Aquatic Ecosystems**
Frederick Reginald Bentley, 15, duPont Manual Magnet High School, Louisville, Kentucky
Kyle Abney Huninghake, 16, duPont Manual Magnet High School, Louisville, Kentucky
- MA042 **A Finiteness Property for Integral Points in a Family of Conics**
Sohan Venkat Mikkilineni, 17, Detroit Country Day School, Beverly Hills, Michigan
- ME046 **Can Light Be Used to Detect Blood Sugar Levels? Year Two**
Julie Krystine Loza, 16, Kouts High School, Kouts, Indiana
- MI051 **High Intensity Focused Ultrasound Effect on *Saccharomyces cerevisiae* and Cancer**
China M. Melton, 17, Poughkeepsie High School, Poughkeepsie, New York
- PH016 **Chaos from Order-Order from Chaos: Can There Be a Way of Containing Chaos in Tokamaks?**
Esther Oluchukwu Uduehi, 17, Francis Joseph Reitz High School, Evansville, Indiana
- ZO025 **A Molecular Analysis of Variation Within Microsatellite Loci of a Controlled Population of White-tailed Deer (*Odocoileus virginianus*) from Southern Maryland**
Ethan Douglas Sperry, 16, Terre Haute South Vigo High School, Terre Haute, Indiana

Students must enroll full time and maintain a 3.0 cumulative GPA.

Marian College

Presenting scholarship awards in the amount of \$12,000 a year for four years. The area of study must be in Mathematics, Biology or Chemistry.

Scholarship Award of \$12,000 per year for four years.

- CH056 **The Preservative Effects of Various Saccharides on *Rosa hybrida***
Allison Marie Lange, 17, Noblesville High School, Noblesville, Indiana
- CH057 **The Influence of Reference Power on Calorimetrically Determined Thermodynamic Parameters**
Sara D. Niedbalski, 17, Marian High School, Mishawaka, Indiana

Award winner must be admitted into Marian College.