

## **INTEL ISEF 2015 GRAND AWARD WINNERS**

May 15, 2015, Pittsburgh, PA – Society for Science & the Public, in partnership with the Intel Foundation, announced Grand Awards of the Intel ISEF 2015. Student winners are ninth through twelfth graders who earned the right to compete at the Intel ISEF 2015 by winning a top prize at a local, regional, state or national science fair.

### **Dudley R. Herschbach SIYSS Award**

The SIYSS is a multi-disciplinary seminar highlighting some of the most remarkable achievements by young scientists from around the world. The students have the opportunity to visit scientific institutes, attend the Nobel lectures and press conferences, learn more about Sweden and experience the extravagance of the Nobel festivities. Valid passport required for travel.

### **Proteomic Characterization of Mosquito Host Cell Glycoproteins during Dengue Virus Egress**

Carly Elizabeth Crump, 18, Episcopal School of Jacksonville, Jacksonville, Florida

### **Innovation Exploration Award**

From the first rocket research in 1936, to the first US satellite in 1958, to the many missions to learn about Venus, Neptune, Jupiter and most recently the Mars Curiosity Lander in 2012, the Jet Propulsion Laboratory, California Institute of Technology (Caltech), is a place where science, technology and engineering intermix. JPL produces iconic robotic space explorers sent to every corner of the solar system, helping us discover how the universe, the solar system, and life formed and evolved. JPL was established in 1944 by Caltech, one of the world's premier scientific and technical universities whose mission is to expand human knowledge and benefit society through research integrated with education.

Innovation Exploration Award, California Institute of Technology

### **In-Fiber Emulsification of Biodegradable Polymers for Drug Delivery, Year Two**

Catherine J. Li, 18, Lake Highland Preparatory School, Orlando, Florida

## ANIMAL SCIENCES

### *Second Award of \$1,500*

#### **The Food Preference of the Sri Lankan Weevil, *Myloccerus undecimpustulatus undatus* Marshall (Coleoptera: Curculionidae: Entiminae)**

Sana Shareef, 14, Saint Edward's Upper School, Vero Beach, Florida

### *Third Award of \$1,000*

#### **Evolution of Nervous System Function and Behavior in a Micro-Vertebrate, the Brahminy Blindsnake (*Ramphotyphlops brahminus*)**

River Connell Grace, 15, West Shore Junior-Senior High School, Melbourne, Florida

### *Fourth Award of \$500*

#### **Do Prenatal Vitamins Inhibit Cell Growth? The Effects of Butylated hydroxyanisole and Butylated hydroxytoluene on Blastemal Cell Growth and Development**

Madison J. Fish, 16, Rutherford High School, Panama City, Florida

#### **The Future of Agriculture**

Kyle Douglas Fox, 16, Villages Charter High School, The Villages, Florida

Hayden Fox Siverson, 16, Villages Charter High School, The Villages, Florida

## BEHAVIORAL AND SOCIAL SCIENCES

### *Second Award of \$1,500*

#### **Analysis of Peripheral Vision to Aid the Reading Process in Patients with Macular Degeneration**

Noopur Ranganathan, 16, Trinity Preparatory School, Winter Park, Florida

### *Fourth Award of \$500*

#### **Is Stress the New Drug? An Analysis on the Effects of Stress on the Prefrontal Cortex and the Addicted Brain**

Lila Mish, 16, American Heritage School of Boca Delray, Delray Beach, Florida

#### **Craniometrix: Using Sensory Dissonance to Identify Cognitive Decline, Year Three**

Nikhil Sanjay Patel, 15, Oviedo High School, Oviedo, Florida

## BIOMEDICAL AND HEALTH SCIENCES

*Third Award of \$1,000*

### **WUBEE: An Autism Destroying Avatar**

Sapna K. Patel, 14, Oviedo High School, Oviedo, Florida

*Fourth Award of \$500*

### **Clinical Accuracy of Non-Invasive Glucose Monitoring for Ex-Vivo Artificial Pancreas**

Maya Miriam Levy, 15, Dr. Michael M. Krop Senior High School, Miami, Florida

## CHEMISTRY

*Fourth Award of \$500*

### **Engineering an Upconversion Photocatalyst for Energy and Environmental Applications**

Vignesh Chandra Bhethanabotla, 16, C. Leon King High School, Tampa, Florida

## EARTH AND ENVIRONMENTAL SCIENCES

*Third Award of \$1,000*

### **Design, Construction and Optimization of a Low-Cost Portable Enterococci Test (PET) Kit**

Margaret Parrish, 16, Chamberlain High School, Tampa, Florida

### **H2O<sub>h</sub> No: Pharmaceuticals Contaminate Groundwater! Sulfamethazine Adsorption Isotherms and Kinetics with Hypercrosslinked Polymer MN250 at Varying Ionic Strengths**

Maria Elena Grimmett, 16, Oxbridge Academy of the Palm Beaches, West Palm Beach, Florida

## ENERGY: CHEMICAL

*Third Award of \$1,000*

### **Geometric Manipulation of Cuprous Oxide Nanocrystal Surface Morphology Enhances Photoelectrochemical Properties and Enables Fabrication of Low-Cost, High Efficiency Photovoltaic Cells**

Elizabeth P. Donoway, 17, Pine Crest School, Fort Lauderdale, Florida

*Fourth Award of \$500*

**Algae....the Greener Fuel, Year Four**

Alexandra Katrina Gabrielski, 16, Viera High School, Viera, Florida

**ENGINEERING MECHANICS**

*Third Award of \$1,000*

**A Novel Prosthetic Design Utilizing a Unique Sensory Control System, Brushless Motor Drives, and Worm Gear Mechanisms through Rapid Prototyping Techniques**

Megan Rose Erdozain, 16, Medical Academy for Science and Technology, Homestead, Florida

**ENVIRONMENTAL ENGINEERING**

**Second Award of \$1,500**

**Production of Energy and Fertilizer from Ordinary Waste Materials through Micro-Scale Anaerobic Digestion**

Robert Z. Halfon, 16, American Heritage School of Boca Delray, Delray Beach, Florida

**MATERIALS SCIENCE**

*Intel ISEF Best of Category Award of \$5,000*

**In-Fiber Emulsification of Biodegradable Polymers for Drug Delivery, Year Two**

Catherine J. Li, 18, Lake Highland Preparatory School, Orlando, Florida

*First Award of \$3,000*

**In-Fiber Emulsification of Biodegradable Polymers for Drug Delivery, Year Two**

Catherine J. Li, 18, Lake Highland Preparatory School, Orlando, Florida

**MICROBIOLOGY**

*Intel ISEF Best of Category Award of \$5,000*

**Proteomic Characterization of Mosquito Host Cell Glycoproteins during Dengue Virus Egress**

Carly Elizabeth Crump, 18, Episcopal School of Jacksonville, Jacksonville, Florida

*First Award of \$3,000*

**Proteomic Characterization of Mosquito Host Cell Glycoproteins during Dengue Virus Egress**

Carly Elizabeth Crump, 18, Episcopal School of Jacksonville, Jacksonville, Florida

*Third Award of \$1,000*

**The Effects of Kojic Acid and PTU on the Synergistic Antimicrobial Properties of *S. bullata* & *S. frugiperda* Hemolymph with Gentamycin on *E. coli***

Lindsay Martin, 17, Seminole High School, Sanford, Florida

*Fourth Award of \$500*

**The Battle Against Cystic Fibrosis Complication Continues...**

Divya Ravinder, 16, International Baccalaureate School at Bartow High School, Bartow, Florida

**PHYSICS AND ASTRONOMY**

*Third Award of \$1,000*

**Critical Point Energy Storage**

Shixuan Justin Li, 17, Rutherford High School, Panama City, Florida

**PLANT SCIENCES**

*Third Award of \$1,000*

**How Can the Efficacy of Potential Biological Controls against *Mikania micrantha* Be Enhanced? The Role of Adjuvants in Disease Progress**

Haniya Shareef, 14, Lincoln Park Academy, Fort Pierce, Florida

*Fourth Award of \$500*

**Weed Warfare: Investigating Allelopathy, Year Five**

Julia Grace Canady, 16, Lakeland Christian School, Lakeland, Florida

## **ROBOTICS AND INTELLIGENT MACHINES**

*Fourth Award of \$500*

### **The Implantation of the Phototaxic Behavior of Physarum polycephalum in a Decentralized Robotics System**

William Henry Langhorne, 17, Pensacola High School, Pensacola, Florida

## **SYSTEMS SOFTWARE**

*Second Award of \$1,500*

### **Developing Mobile Algorithms to Detect Seizures and Falls**

Amir Helmy, 14, Eastside High School, Gainesville, Florida