

# CONGRATULATIONS! FLORIDA INTEL ISEF GRAND AWARD WINNERS 2018

**PITTSBURGH, PA** – Society for Science & the Public, in partnership with the Intel Foundation, announced Grand Awards of the Intel ISEF 2018. Student winners are ninth through twelfth graders who earned the right to compete at Intel ISEF 2018 by winning a top prize at a local, regional, state, or national science fair.

For each Best of Category winner, a \$1,000 grant will be given to the winners' school and the Intel ISEF Affiliated Fair they represent.

## **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. A TRIP to the NOBEL PRIZE FESTIVITIES!

MATH006 — *A Fine Classification of Second Minimal Odd Orbits*

- Muhammad Abdulla, West Shore Junior/Senior High School, FL, United States of America

## **BEHAVIORAL AND SOCIAL SCIENCES**

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

BEHA043 — *Treating Parkinsonian Neurodegeneration in Diabetic, Paraquat-exposed Drosophila by Increasing Caffeine Intake*

- Ephraim Oyetunji, American Heritage School, FL, United States of America

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

BEHA002 — *KeMotions: Keys to Emotional Cues, Year Two*

- Sapna Patel, Oviedo High School, FL, United States of America

### **Fourth Award of \$500**

BEHA047 — *Combatting Familial Alzheimer's Disease by Comparing Calcium Retention of Mutated Presenilin Genes and Assessing the Restorative Potential of Parathyroid Hormone in a Caenorhabditis elegans Model*

- Amber Bhutta, American Heritage School, FL, United States of America

## **BIOMEDICAL AND HEALTH SCIENCES**

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

BMED003 — *Discovery of Blood-Brain Barrier Disruption Regional Variability and Neuronal and Glial Uptake of Fibrinogen in Multiple System Atrophy Using a Novel Color Deconvolution Algorithm*

- Devanik Biswas, Stanton College Preparatory School, FL, United States of America

BMED014 — *Efficiency of a Novel Nano-Cardiac Device for Atherectomy of Coronary Artery Occlusion*

- Ethan Levy, Dr. Michael M. Krop Senior High School, FL, United States of America

BMED067T — *Near Infrared Light Photobiomodulation and C. longa Mitigates the Neurological Effects of Mutant Amyloid Beta Precursor Protein Pathway in D. melanogaster*

- Hoang Le, Western High School, FL, United States of America
- Laura Allen, Western High School, FL, United States of America

### **Fourth Award of \$500**

BMED006 — *Effectiveness of 3D vs. 2D in vitro Well Treatments*

- Lillian Zobel, Satellite High School, FL, United States of America

BMED008 — *Protective Effects of Natural Products Like Curcumin and Centella asiatica Against Amyloid Beta Induced Mitochondrial Dysfunction in Ocular Manifestations of Alzheimer's Disease*

- Himanshi Verma, Eastside High School, FL, United States of America

## **EARTH AND ENVIRONMENTAL SCIENCES**

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

EAEV044 — *Carbon Capture Using Solid Sorbents. Amine-tethered Polystyrene and Ppolyacrylic Polymers for CO2 Adsorption*

- Glenn Grimmatt, American Heritage School of Boca Delray, FL, United States of America

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

EAEV056 — *Combating Hepatocellular Carcinoma in the Developing World: A Novel Discovery of the Fungicidal Potential of Bicarbonate Solutions Against Aspergillus flavus*

- Evan Collins, Ridgeview High School, FL, United States of America

### **Fourth Award of \$500**

EAEV055 — *Insights into the Effects of Tropical Disturbances Hurricane Irma and Invest 92L on the Dynamics of the Phytoplankton Community of the Estero Bay Estuary*

- Mark Leone, Canterbury School, FL, United States of America

## **ENVIRONMENTAL ENGINEERING**

ENEV059 — *Developing a Biologically Based Artificial Leaf to Filter and Transform Carbon Dioxide Emissions into Oxygen via Photosynthesis*

### **Fourth Award of \$500**

- Vithulan Suthakaran, Florida Atlantic University High School, FL, United States of America

## **MATHEMATICS**

### **Intel ISEF Best of Category Award of \$5,000 AND First Award of \$3,000**

MATH006 — *A Fine Classification of Second Minimal Odd Orbits*

- Muhammad Abdulla, West Shore Junior/Senior High School, FL, United States of America

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

MATH002 — *Generalized Persistence Parameters for Analyzing Stratified Pseudomanifolds*

- Gianfranco Cortes-Arroyo, West Port High School, FL, United States of America

## **MATERIALS SCIENCE**

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

MATS003 — *Developing a 3D Printer Capable of Producing Hybrid Hydrogel Based Artificial Cartilage*

- Anna Feldbush, West Shore Junior/Senior High School, FL, United States of America

### **Fourth Award of \$500**

MATS026 — *Radiation Prevention: One Fiber at a Time*

- Kaylee Cunningham, Olympic Heights Community High School, FL, United States of America

## **MICROBIOLOGY**

### **First Award of \$3,000**

MCRO006 — *Green Watts: Investigating Power Generation of *Spartina patens* Compared to *Chlorophytum comosum* by Utilizing a Mixed *Shewanella oneidensis* MR-1 Community in a Plant Microbial Fuel Cell (A Novel Fourth Year Study)*

- Luke Long, Canterbury School, FL, United States of America

### **Fourth Award of \$500**

MCRO041 — *Utilizing Kefir Bacteria to Target NF- $\kappa$ B of the Bax Gene to Induce Apoptosis in Colorectal Adenocarcinoma Cells*

- Tushar Shenoy, American Heritage School of Boca Delray, FL, United States of America

## **PHYSICS AND ASTRONOMY**

### **Fourth Award of \$500**

PHYS001 — *Challenging Limitations: Using Deep Learning, Time Series Analysis, and Statistical Methods for Noise Reduction to Develop an Innovative Approach to Exoplanet Candidate Detection Using Earth-Based Telescopes*

- Dahlia Dry, Fort Myers High School, FL, United States of America

## **ROBOTICS AND INTELLIGENT MACHINES**

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

ROBO008 — *The Creation of a Wearable Device Using Artificial Intelligence Technologies to Aid the Visually Impaired*

- Omar Shareef, Saint Edward's School, FL, United States of America