

# UAB-CORD CARSEF Winners

March 3, 2023

## CARSEF TOP HONORS SENIOR DIVISION

The 4 projects on this page advance directly to the Regeneration International Science and Engineering Fair

### **Yiwen Wang**

11<sup>th</sup> Grade

Northridge High School

Project Title: Developing Earth-Abundant Aluminum-Ion Batteries Using Chloroaluminate Ionic Liquid Electrolytes and Recycled Aluminum Scraps for Electric Vehicles and the Electricity Grid

### **Anusha Singh**

11<sup>th</sup> Grade

Vestavia Hills High School

Project Title: Investigating the Effects of Papaver somniferum Seeds and Curcuma longa on Wound Healing Using Drosophila melanogaster as a Model Organism

### **Daniel Zhao**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: TrackAiR: Tracking Moving Aerial Targets with Reinforcement Learning

### **Amith Varambally**

12<sup>th</sup> Grade

Vestavia Hills High School

Project Title: Giant Superconducting Diode Effect from Controlled Edge Asymmetry

# CARSEF CATEGORY WINNERS

## Senior Division

### BEHAVIORAL AND SOCIAL SCIENCE

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

#### *1<sup>st</sup> Place*

**Joscelyn Peterson**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: The Effects of Environmental Disparities on the Environmental Awareness of High School Students in the Greater Birmingham Area

#### *2<sup>nd</sup> Place*

**Nicole Sazonov**

11<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: A Wasserstein Generative Adversarial Network for Microrhythm Generation in Drum Tracks

#### *3<sup>rd</sup> Place*

**Sahana Donti**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: Parent and Peer Influence on Youth Civic Engagement during the Covid Pandemic: Relative Effects and Variation by Sex, Geographic Rurality, Race, and Socioeconomic Status

#### *Honorable Mention*

**Kinley Wilson, Jacie Pettigrew & Emma White**

9<sup>th</sup> Grade

Locust Fort High School

Project Title: This is Impossible

**Paul Lovejoy, Noah Weber & Kell Littlefield**

12<sup>th</sup> Grade

Hewitt-Trussville High School

Project Title: HNGOUT

**Haley Wilkinson & Emily Bozeman**

12<sup>th</sup> Grade

Hewitt-Trussville High School

Project Title: Accessible Board Games for the Visually Impaired

## **BIOLOGY – Senior Division**

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Anusha Singh**

11<sup>th</sup> Grade

Vestavia Hills High School

Project Title: Investigating the Effects of Papaver somniferum Seeds and Curcuma longa on Wound Healing Using Drosophila melanogaster as a Model Organism

### 2<sup>nd</sup> Place

**Ashu Anand & Martin Vizzina**

10<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: The Effects of Light Radiation on Planarian Regeneration Time

### 3<sup>rd</sup> Place

**Sophia Guo & David Wang**

9<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: Investigating Probiotic Growth Stimulation Effects of Certain Probiotics

### Honorable Mention

**Adrianna Lucre**

10<sup>th</sup> Grade

Holy Family Cristo Rey Catholic High School

Project Title: Do Humans Know the Difference? Artificial Vs. Natural

**Eva Ledvina**

11<sup>th</sup> Grade

Holy Family Cristo Rey Catholic High School

Jefferson County International Baccalaureate

Project Title: How Temperature Changes Have Affected Ruby-throated Hummingbird (Archilochus colubris) Fall Migration Through Jefferson County from 2017 to 2022

**Wardah Naim & Mengzhen Wang**

10<sup>th</sup> Grade

Vestavia Hills High School

Project Title: Mediating the Microbiome: Developing a Pathway to Examine Probiotic Effects on Diabetes: Type 1

## CHEMISTRY – Senior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Jakub Hel**

11<sup>th</sup> Grade

Hoover High School

Project Title: Investigating the Allelopathic Properties of the Invasive Cogongrass (*Imperata cylindrica*)

### 2<sup>nd</sup> Place

**Savannah Osborn**

10<sup>th</sup> Grade

Holy Spirit Catholic High School

Project Title: Electrolyte Challenge

### 3<sup>rd</sup> Place

**Maria Lopez**

10<sup>th</sup> Grade

Holy Spirit Catholic High School

Project Title: The Grams to Spherification

### Honorable Mention

**Robbie Tillman**

11<sup>th</sup> Grade

Holy Spirit Catholic High School

Project Title: Stain 'n Spray

**Mateo Innis-Kopelson**

10<sup>th</sup> Grade

Holy Spirit Catholic High School

Project Title: Does Phosphoric Acid or Citric Acid Damage Teeth Enamel More?

**Sacario Thomas**

10<sup>th</sup> Grade

P.D. Jackson-Olin High School

Project Title: Soak It Before the Droplets

## ENERGY AND TRANSPORTATION – Senior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Yiwen Wang**

11<sup>th</sup> Grade

Northridge High School

Project Title: Developing Earth-Abundant Aluminum-Ion Batteries Using Chloroaluminate Ionic Liquid Electrolytes and Recycled Aluminum Scraps for Electric Vehicles and the Electricity Grid

### 2<sup>nd</sup> Place

**Russell Starcher**

12<sup>th</sup> Grade

Hewitt-Trussville High School

Project Title: NASA Lunar Scooter Wheel

### 3<sup>rd</sup> Place

**Ben Capps, Westen Ellison & Jacob Lee**

12<sup>th</sup> Grade

Hewitt Trussville High School

Project Title: Lunar Solar Panel Cleaner

### Honorable Mention

**Levi Gels**

11<sup>th</sup> Grade

Hoover High School

Project Title: Solar Panel Effectiveness

**Jacob Moore & James Lovin**

12<sup>th</sup> Grade

Hewitt Trussville High School

Project Title: Compressed Air Windshield Clearing Device

**Andrew Brien**

12<sup>th</sup> Grade

Hewitt Trussville High School

Project Title: Shipping Energy

## ENGINEERING – Senior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Leo Koppel & James McDaniel**

12<sup>th</sup> Grade

Hewitt-Trussville High School

Project Title: Developing and Prototyping a Wheelchair that Helps Disabled People Exercise

### 2<sup>nd</sup> Place

**Mustafa Alperen Gurbuz & Adonay Mahatsente-Tewelde**

11<sup>th</sup> Grade & 10<sup>th</sup> Grade

Northridge High School

Project Title: Cleaning up the World's Oceans with ROV-Mounted DNN-Based Underwater Laser Image Recognition

### 3<sup>rd</sup> Place

**Max Herring & William Phillips**

12<sup>th</sup> Grade

Hewitt Trussville High School

Project Title: NASA Lunar Table

### Honorable Mention

**Sarah Copham, Taylor McFarland & Hannah Smith**

12<sup>th</sup> Grade

Hewitt Trussville High School

Project Title: Accessible Cookware Designed for Visually Impaired Users

**Noah Davies & Ian Hunsberger**

12<sup>th</sup> Grade

Hewitt Trussville High School

Project Title: Disc Golf Tracking System Utilizing Circuits and Sensors

## ENVIRONMENTAL AND EARTH SCIENCE – Senior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Steven Tran**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: A Mathematical Model for PFOA and PFOS Pollution in Northern Alabama and its Impact on Human Health

### 2<sup>nd</sup> Place

**Aanchal Behara**

10<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: Impact of Ocean Acidification and Elevated Temperatures on Acusta Assimilis

### 3<sup>rd</sup> Place

**Isabella Wise**

10<sup>th</sup> Grade

Locust Fort High School

Project Title: Algae Assassins

### Honorable Mention

**Radyn Moradkhani**

10<sup>th</sup> Grade

Indian Springs School

Project Title: Fusion or Multi-Satellite Data Through Deep Learning for Flood Forecasting

**Tiffany Chavez Guitierrez, Nancy Guzman & Jazmin Sontay**

9<sup>th</sup> Grade

Holy Family Cristo Rey Catholic High School

Project Title: Waste Management at Holy Family Cristo Rey

**Syeda Fatima**

10<sup>th</sup> Grade

Hoover High School

Project Title: Leaf Packs

## MATHEMATICS AND COMPUTER SCIENCE – Senior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Daniel Zhao**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: TrackAiR: Tracking Moving Aerial Targets with Reinforcement Learning

### 2<sup>nd</sup> Place

**Arsalan Ahmed**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: Predictive Personalized Drug Screening: An Acute Myeloid Leukemia Study

### 3<sup>rd</sup> Place

**Mingpu Wu**

11<sup>th</sup> Grade

Indian Springs School

Project Title: Machine Learning Methods: Implementation of the Classification and Diagnosis of Alzheimer's Disease

### Honorable Mention

**Jesse Seidel**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: Covid-19 Case Prediction Using Long Short-Term Memory Models

**McNair Shah**

10<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: ArtSynRL: Reinforcement Learning for Articulatory Synthesis

**Noah Lowry & Conrad Feng**

9<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: CFNN: Detection of Cervical Spine Fractures with Resource Efficient Convolution Neural Networks

## MEDICINE AND HEALTH SCIENCE – Senior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Monisha Bommu**

10<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: The Effect of Caffeine Concentrations on the Time of Planarian Regeneration

### 2<sup>nd</sup> Place

**Cynthia Li**

12<sup>th</sup> Grade

Indian Springs School

Project Title: Evaluation of 3 Non-Invasive Automated BP Devices

### 3<sup>rd</sup> Place

**Andrew Hemstreet**

9<sup>th</sup> Grade

Holy Spirit Catholic High School

Project Title: What Mask is Up to the Task

### Honorable Mention

**Mayu Nakano**

12<sup>th</sup> Grade

Indian Springs School

Project Title: Novel Proteogenomics-Guided Precision Oncology Roadmap Targeting Chemoresistance

**Patrick Pan**

11<sup>th</sup> Grade

Northridge High School

Project Title: Pedobarographic Analysis of Progressive Flatfoot Deformity Generated by Serial Ligament

**Adeline Veillon**

10<sup>th</sup> Grade

Holy Spirit Catholic High School

Project Title: Teens vs. Migraines

## PHYSICAL SCIENCE – Senior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Amith Varambally**

12<sup>th</sup> Grade

Vestavia Hills High School

Project Title: Giant Superconducting Diode Effect from Controlled Edge Asymmetry

### 2<sup>nd</sup> Place

**Kayla Allen & Evan Hatcher**

10<sup>th</sup> Grade

Locust Fort High School

Project Title: How Can Seebeck Effect You?

### 3<sup>rd</sup> Place

**Isaac Smitherman, Jordan Moon & Carmine Johnson**

10<sup>th</sup> Grade

Locust Fort High School

Project Title: Space Shields

### Honorable Mention

**Rachel Morrow**

10<sup>th</sup> Grade

Holy Family Cristo Rey Catholic High School

Project Title: Does Mass Affect Momentum

**Damia Duncan**

10<sup>th</sup> Grade

Holy Family Cristo Rey Catholic High School

Project Title: Are the Shoes Actually Build 4 the Athlete?

# CARSEF CATEGORY WINNERS

## Junior Division

### BEHAVIORAL AND SOCIAL SCIENCE

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

#### 1<sup>st</sup> Place

**Teagan Phillips**

8<sup>th</sup> Grade

Duran North Junior High School

Project Title: Neurodivergent Learning

#### 2<sup>nd</sup> Place

**Noor Abumahfouz**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Emotional Expression

#### 3<sup>rd</sup> Place

**Syriana Johnson**

7<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Doodle Noodle Fidget Widget

#### Honorable Mention

**Ava Abbott**

8<sup>th</sup> Grade

Duran North Junior High School

Project Title: Getting Centimental About Allowances

#### Honorable Mention

**Jordyn Robinson & Asia Holt**

8<sup>th</sup> Grade

W.J. Christian K8 School

Project Title: Sound On Sound Off

#### Honorable Mention

**Malak Alabsi**

7<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Right Away

## **BIOLOGY – Junior Division**

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Raghd Saleh**

8<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Healthy Hygiene

### 2<sup>nd</sup> Place

**Muaid Mohamed**

7<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Thirsty for Energy

### 3<sup>rd</sup> Place

**Diya Issa**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Iron Time

### Honorable Mention

**Landy Shi**

8<sup>th</sup> Grade

Duran North Junior High School

Project Title: Mean Clean

**Griffin Gordy**

8<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Hey Bass, What's for Dinner Part 2

**Yasmina Ghannoum**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Soft Skin

## CHEMISTRY – Junior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Elizabeth Jones**

8<sup>th</sup> Grade

Duran North Junior High School

Project Title: How Does Salt Affect the Temperature of Boiling Water?

### 2<sup>nd</sup> Place

**Safa Alnaham**

8<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Gulp Gulp

### 3<sup>rd</sup> Place

**Henry Bearden & Madison Lee**

7<sup>th</sup> Grade

Tuscaloosa Magnet Schools Middle

Project Title: What Causes Acid Rain?

### Honorable Mention

**Sydney Armour**

6<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Egg-celent

**Leen Mango**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Led-sticks

**Kasey Duncan**

8<sup>th</sup> Grade

W.J. Christian K8 School

Project Title: Hell-O Jell-O

## ENERGY AND TRANSPORTATION – Junior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Zubayr Rasheed**

8<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: AeroVantage

### 2<sup>nd</sup> Place

**Marie-Sophia Kaplan**

8<sup>th</sup> Grade

Duran North Junior High School

Project Title: What Paper Airplanes Soar the Skies Best?

### 3<sup>rd</sup> Place

**Alex Zhu, Rachel Shu & Max Morgan**

7<sup>th</sup> Grade

Northridge Middle School

Project Title: How is Electricity Generated from a Bike?

### Honorable Mention

**Yusuf Nabi & Haroon Nabi**

8<sup>th</sup> Grade & 7<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Steaming Power

**Carlos Calhoun**

8<sup>th</sup> Grade

W.J. Christian K8 School

Project Title: Need For Speed

**Remas Ahmed**

7<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Solar Fun

## ENGINEERING – Junior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Mohamed Taer**

8<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Super Strength

### 2<sup>nd</sup> Place

**Carlos-loco Coma**

6<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Get Some Sunlight!

### 3<sup>rd</sup> Place

**Darryl Croom**

8<sup>th</sup> Grade

Bush Hills Steam Academy

Project Title: Custom Made Drone

### Honorable Mention

**Ayman Abdulla**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Floor Strength

**Taraji Thornton**

6<sup>th</sup> Grade

W.J. Christian K8 School

Project Title: Shake Shake with Earthquakes!

## ENVIRONMENTAL AND EARTH SCIENCE – Junior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Savannah Lee**

8<sup>th</sup> Grade

Duran North Junior High School  
Project Title: Hydroponic Lettuce

### 2<sup>nd</sup> Place

**Nigel Senkbeil**

8<sup>th</sup> Grade

Holy Spirit Catholic School  
Project Title: 5 Second Rule

### 3<sup>rd</sup> Place

**Ethan Swardson**

7<sup>th</sup> Grade

Holy Spirit Catholic School  
Project Title: Grass vs. Soil Erosion

### Honorable Mention

**Jacob Shankman**

8<sup>th</sup> Grade

Northridge Middle School  
Project Title: Soil Type and Water Infiltration

**Murtada Eltoun**

6<sup>th</sup> Grade

Islamic Academy of Alabama  
Project Title: Allelopathy

**Hamzah Alzyat**

8<sup>th</sup> Grade

Islamic Academy of Alabama  
Project Title: DECHLORO

## MATHEMATICS AND COMPUTER SCIENCE – Junior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Aeesha Mulani**

7<sup>th</sup> Grade

Tuscaloosa Magnet School Middle

Project Title: Quantum Computing – A Boon for the Future?

### 2<sup>nd</sup> Place

**Noor Abouhouli**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Watts in my Bill?

### 3<sup>rd</sup> Place

**Mustafa Jaber**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Shoot by the Angles?

### Honorable Mention

**Molli Joiner**

8<sup>th</sup> Grade

Duran North Junior High School

Project Title: Getting Down the Bitness

**Leen Dabbous**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Shadow Measurement

## MEDICINE AND HEALTH SCIENCE – Junior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Rosie Zhang**

8<sup>th</sup> Grade

Northridge Middle School

Project Title: Efficiency of Bacterial Prevention Based on Face Mask Type

### 2<sup>nd</sup> Place

**Leen Zidan**

8<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Milky Way

### 3<sup>rd</sup> Place

**Mays Mango**

7<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Think Before Eating!

### Honorable Mention

**Maryam Kanpher**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Shaggy Cap

**Ryah Ali**

8<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Blocky Blood

**Chauncey Nickerson**

8<sup>th</sup> Grade

W.J. Christian K8 School

Project Title: Matters of the Heart

## PHYSICAL SCIENCE – Junior Division

1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will advance to the Alabama Science and Engineering Fair

### 1<sup>st</sup> Place

**Maryam Rasheed**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: How Much is Too Much?

### 2<sup>nd</sup> Place

**Jayden Yoon**

7<sup>th</sup> Grade

Northridge Middle School

Project Title: What is the Relationship Between Sound and Frequency?

### 3<sup>rd</sup> Place

**Kasen Veillon**

7<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Acceleration Applications

### Honorable Mention

**William Cross**

6<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: At-tension! Water

**Cosby Carmichael**

6<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Science by the Campfire

**Brantson Dillard**

6<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Pepper and Salt: What's at Fault

# SPECIAL AWARD WINNERS

## AMERICAN PSYCHOLOGICAL SOCIETY

*"Best" in Research in Psychological Science*

**Ariq Isyraqi & Silvia Hancock**

8<sup>th</sup> Grade

Northridge Middle School

Project Title: Does the Color of Food Affect Someone's Perception

**Jazmin Arnold**

12<sup>th</sup> Grade

Hewitt-Trussville High School

Project Title: A Better Birmingham Zoo: Developing Navigation Tools for Visually Impaired

## ASSOCIATION FOR WOMEN GEOSCIENTISTS

*"Best" Female Project in Geosciences*

**Emma Kennedy**

8<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Do You Hear That...Buzz

## NASA EARTH SYSTEM SCIENCE AWARD

*"Best" Insight into Earth's Interconnected System*

**Sarah Sabatino**

8<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: The Perfect Potash

## NATIONAL GEOGRAPHIC SOCIETY AWARD

*"Best" Cultivating Empathy for Earth Award*

***\$100 Award***

**Tyler Fogg & Ryan Gudgen**

12<sup>th</sup> Grade

Hewitt-Trussville High School

Project Title: Autonomous Beach Cleaning Robotic System

**NOAA'S TAKING PULSE OF PLANET AWARD**

*"Best" Innovation for Improved Understanding of Earth's Dynamic Process*

**Sarim Mahmood**

6<sup>th</sup> Grade

Islamic Academy of Alabama

Project Title: Health of Local Lakes

**REGENERON BIOMEDICAL SCIENCE AWARD**

*"Best" Biomedical Science*

**\$375 Award**

**Monisha Bommu**

10<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: The Effect of Caffeine Concentration on the Time of Planarian Regeneration

**SOCIETY FOR IN VITRO BIOLOGY**

*Outstanding Achievement in In Vitro Biology*

**Andrew Hemstreet**

9<sup>th</sup> Grade

Holy Spirit Catholic High School

Project Title: What Mask is Up to the Task

**STOCKHOLM JUNIOR WATER PRIZE**

*Outstanding Water-Related Research*

**Sadie McClendon**

10<sup>th</sup> Grade

Holy Spirit Catholic School

Project Title: Does the Amount of Use Affect Water Quality in Water Fountain

**Abby Guillory**

11<sup>th</sup> Grade

Hoover High School

Project Title: Effects of Certain Air Quality Parameters on Water Turbidity

**UNITED STATES AIR FORCE**

*"Outstanding Project in STEM"*

**Daniel Zhao**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: TrackAIR: Tracking Moving Aerial Targets with Reinforcement Learning

**Madison Lee & Henry Bearden**

7<sup>th</sup> Grade

Tuscaloosa Magnet School

Project Title: What Causes Acid Rain

**YALE SCIENCE AND ENGINEERING ASSOCIATION, INC.**

*Most Outstanding in Computer Science, Engineering, Physics or Chemistry*

**Arsalan Ahmad**

12<sup>th</sup> Grade

Alabama School of Fine Arts

Project Title: Predictive Personalized Drug Screening: An Acute Myeloid Leukemia Study