

### The Effect of An External Wind Diverter on a Wind Turbine

**Esmeralda Montas** took Science Research to see if she could bring some of her ideas into fruition. As a student interested in pursuing mechanical engineering, she looked into various applications that might make a difference in the real world. This search eventually led to her present project: *The Effect of an External Wind Diverter on a Wind Turbine*. Interested in how things work, Esmeralda and her brother, Enrique, tested an apparatus that would divert wind energy to the wind turbine. It was later concluded that under ideal conditions the apparatus had the potential to double the amount of power generated from a wind turbine. Aside from the Science Research Program, she took part in the ACE Mentor Program at Con Edison, the Integrated Science Association, and volunteered as a CYO basketball coach. This coming fall she is going to attend Brown University. Her long term goal is to go to medical school to become a surgeon. In this way, she will be able develop scientific applications to help save lives.

### THANK YOU

The Seniors wish to thank administration, and especially our program director, Ms. Mallia.

### Junior Research Paper Presentations

[1] *Sleep Deprivation and False Memories*  
Bahey About-Hussein

[2] *Immobilization and Functional Treatment for Acute Lateral Ligament Injuries*  
Emmanuel Adeyele

[3] *Rapid and Long-lasting Learning of Feature Binding*  
Gabriella Ali

[4] *Artistic vs. Analytical*  
Jessica Antal and Sonalia Balli

[5] *The Correlation Between Fingerprints and Athletics*  
Samantha Madray

[6] *Nrx Gene Regulate Heart Tube Extension and Exert Differential Effects on Ventricular and Atrial Cell Number*  
Daniel Babet

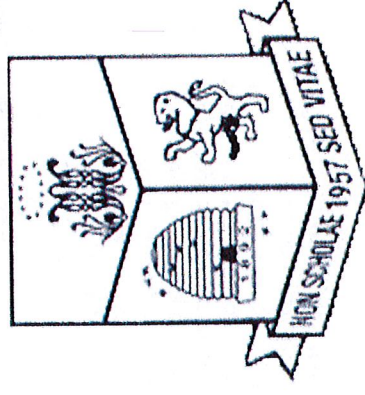
[7] *The Effect of Multiple Heat Sources on Exomoon Habitable Zones*  
Adam Reyes

[8] *Effectiveness of Using I-Pads to Increase Academic Task Completion by Students with Autism*  
Marco Vittozzi

[9] *Eye See You*  
Sabryne Nicole Yu

[10] *RA: Prosthetics and Techniques in Repair of Animals' Abdominal Walls*  
Lilliana Zakrzewski

# Science Symposium



Archbishop Molloy  
High School

May 16, 2017



## Meet the Seniors

### *The Sound of Chess*

**Hobie Legaspi** took Science Research to develop ideas alongside peers, and to work on a project involving his interests. During high school, he enjoyed playing chess after school in Chess Club and listening to music during his free time or while studying. However, he hadn't tried doing both at the same time until recently. This led to Hobie's partnership with Julio Ruiz-Diaz and Calista Regujio on their project called *The Sound of Chess*. The project was designed to test whether or not music affects how a person performs with chess as the means of measurement. The results show that when people listened to music while playing chess, they were more likely to win the game. However, more data has to be collected before the results can be definitive. Regarding the future, Hobie will attend StonyBrook University. He plans to major in mechanical engineering and minor in electrical engineering, eventually getting a job as a mechanical engineer. His long term goal is to improve energy efficiency in transportation.

From an early age, **Julio Ruiz-Diaz** took an interest in science. By participating in the Archbishop Molloy Science Research Program, he hoped to pursue a dream.

### *The Sound of Chess*

Later in his high school career, Julio discovered a love of music. He decided that in order to make the most of his project, he had to include music. This led to the project idea for *The Sound of Chess*. He teamed up with his classmates, Hobie Legaspi and Calista Regujio. As for college, Julio is still unsure where he will attend, but knows that he wants to pursue Anthropology as his major. Maybe one day he will walk in the footsteps of his childhood hero, Indiana Jones.

**Calista Regujio** will attend Binghamton University as an English major on the Pre-Law track. Despite her interest in the liberal arts, Calista joined the Science Research Program to expand her knowledge in scientific fields. Behavioral sciences have always intrigued her, and so she joined forces with Hobie Legaspi and Julio Ruiz-Diaz in pursuit of *The Sound of Chess*. Calista also greatly enjoyed the musical aspect of the project, being a singer and guitar player for nearly ten years. Many of her other interests lie within her additional roles at Molloy. She is a Campus Ministry leader, Peer Group leader, and Spirit leader. Calista plans to use the connections and social skills taken from these positions, combined with the knowledge and research skills taken from Science Research to build a successful, fulfilling future.

### *The Good, The Bad, The Linguistics*

**Stephanie Constance Lechki** is a member of the Science Olympiad Team, participating in events like Fossils, Astronomy, and Anatomy and Physiology. Also, she is part of the Peer Tutoring Program and a Peer Group leader for the sophomores. In the Fall, Stephanie will be attending Tufts University to pursue a double major in Biology and Geological Science. This, in tandem with the Science Research Program, allows her to pursue a career in paleontology. She plans to attain a PhD in vertebrate paleontology, and the foundations in Science Research will have helped her greatly. She chose to do a project in linguistics because language, and the understanding of it, is a core part of what makes us human - a connectivity that resonates between people of different genders, ages and even nationalities.

**Berenice Dupiton** will be attending the University of Albany next year. Majoring in Political Science and minoring in History, she will be on a Pre Law track to become a state prosecutor. Berenice joined the Science Research Program to enhance her skills in research, while also expanding her knowledge of linguistics. She enjoys science and the areas related to her topic. Berenice is a 4 year member of the Archbishop Molloy basketball team. Science Research has taught her leadership both off and on the court. Berenice will also be playing Division I basketball in college.