Chemistry Students to Conduct Research in Prestigious Summer Internship Programs

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Sandy Enriquez and Daysi Proano have several things in common. They both immigrated to the U.S. from South America and learned English as a second language. Both are outstanding students who conduct research under the guidance of Dr. Paris D. Svoronos, a distinguished professor in the Department of Chemistry. As a result of their hard work and ambition, Sandy and Daysi have been accepted into prestigious 2014 summer internship programs at the University of Tennessee at Knoxville and at Georgetown University in Washington, D.C., respectively.

Sandy, originally from Peru, enrolled at Queensborough in the fall of 2011. In her second semester she was given the opportunity to conduct research on “the determination of the total content of antioxidants in juices using microscale visible spectrophotometry”, which allowed her to apply basic principles of General Chemistry to the relationship between antioxidants and free radicals. Her subsequent project, “The determination of gallic acid content in juices by using the high performance liquid chromatography (HPLC)”, established the conditions for the optimum separation of the various components in juices.

Sandy’s hard work was rewarded with two summer internships. The first, in 2012, was with the New York City-Department of Environmental Protection Agency (NYC-DEP). In 2013 she learned biological analytical techniques at Stony Brook University. She presented her results at Yale University’s 2013 American Chemical Society (ACS) Northeast Regional Meeting (NERM). In addition, Sandy attended the 46th Southeast Undergraduate Research Conference (SURC) at the University of Tennessee where she was awarded “Best Analytical Chemistry Research” for her scientific findings on “The determination of gallic acid content in juices by using the high performance liquid chromatography (HPLC).

Sandy said, “Thanks to the excellent guidance of my professors, I have been transformed to a potential post-graduate scientist in the U.S.”

Daysi, born and raised in Ecuador, came to the U.S. three years ago and settled with her family in Queens. She was euphoric upon learning that she was accepted in the 2014 NSF REU Program in Chemistry at Georgetown University. “Research is a very good opportunity to gain experience in the laboratory and a powerful tool to open doors to a successful future.”

Her academic success at Queensborough was established quickly upon her enrollment and in the fall of 2013 she began conducting research under the mentorship of Dr. Svoronos.

On the topic of her particular area of research, Daysi comments that, “Learning how organic synthesis occurs is an amazing form of art. It is like a puzzle: you have all the pieces but must match them to create a desired product.”
Daysi aspires to become a medical doctor and plans to transfer to a four-year college to finish her Bachelor’s degree in Forensic Science or Biochemistry. She will then apply to medical school in the hope of one day becoming a Pediatric surgeon.

Daysi offers a few words of advice to other aspiring scientists:

- Become involved in research early and present your scientific findings at conferences alongside students from four-year schools.
- Participate in campus activities in order to meet new people and connect with professors and advisors.
- Most of all, remember to always challenge yourself because this will help you discover who you really are.

Daysi is a member of Collegiate Science and Technology Entry Program (CSTEP) and the Phi Theta Kappa Honor Society. She was vice president of the Chemistry Club in the fall 2013 and is president this semester. Daysi is also on the Dean’s List.