Overview: The APS K-12 Minority Outreach Fellow gave me the opportunity to visit my former high school. I talked to students from 10th, 11th, and 12th grade about physiology, I also encourage them to consider a carrier in science or physiology. This opportunity helped me to strengthen my teaching skills and organization abilities. We showed the students that physiology and life sciences are not only what the text book shows but much more. Physiology research can be in their community, present in active research institutions, and performed by graduate students studying physiology.

Teaching activity A: The first teaching activity was held on Wednesday, November 6th at Carmen Belen Veiga High School, Juana Diaz, Puerto Rico, as part of the Physiology Understanding week (PhUn Week). A total of 47 high school students, selected from grades 10, 11, 12 who demonstrated a science, math, and/or engineering interest. The teacher-leader coordinator and school counselor, selected students and organized the venue. A total of 11 visiting participants, from Ponce School of Medicine and Health Sciences (PSMHS) donated their time and knowledge to make the activity one to remember by the high school students. PSMHS students and a faculty member were from the Microbiology, Biochemistry and Physiology Department.

The event progressed from lecture presentations to hands-on activities, eg preparing a lung model, demonstration of a real preserved human brain, extraction of molecules that coordinate physiology (DNA Extraction). The PhUn event lasted three hours. The event began with a power point presentation lecture: "Welcome to the World of Physiology", designed to give students information about Physiology as a career option and to learn about physiologists in Puerto Rico. Next was a presentation about the cardiovascular system, followed by the first hands-on activity - preparation of a plastic lung model - using balloons, a plastic bottle, modeling clay, and a straw. The first demonstration and second hands-on activity, was related to neurobiology, where a preserved human brain was used to show the students the different areas of the brain and talk about some neurology. The high school students had the opportunity to touch the brain with the appropriate protective equipment. In the last hands-on activity the students had the opportunity to extract DNA, using ‘gene in a bottle’ (kindly donated by the PSM MBRS-RISE program and available from BioRad for educational purposes). To finish the event the students received ‘goodies’ provided by the APS.

Teaching activity B: The second teaching activity was held outside the classroom. On June 10th, 2014, I visited Copek Bilingual School in Salinas, Puerto Rico. This teaching outreach activity was during the student’s summer camp. A total of 18 students, from 4th to 7th grade, participating of summer fun activities, also enjoyed a summer science morning. The first activity was a presentation about what is physiology, where you can find physiology, how physiology is in your environment and in your cells. After the cells explanation the students proceed to a hands on activity in which they extracted DNA from strawberries. As an additional activity, the students described a scientist/physiologist, and how this impression changed from the beginning of the
activity, to the end of the activity. The students, teachers and staff asked for more activities during next semester or next summer.

**ABRCMS Meeting:** During November 13 -16, 2013, I participated of ABRCMS Annual Conference in Nashville, TN. I worked in the APS promotion booth under the supervision of Brooke Bruthers. She was an excellent mentor and I learned a lot about the APS and meetings working in the booth. I talked to undergraduate and graduate students about that APS summer programs, K-12 Minority Outreach Fellowship. At the same time, I promoted the Fourth Puerto Rico Physiology Society meeting to APS members from the island, present in ABRCMS. Also, I was volunteer judge for the undergraduate poster presentations and evaluated three poster in the cellular and molecular session. In addition, I handed the Physiology awards to the undergraduate students. During the meeting, I also had the opportunity to be present in the scientific plenary sessions. A special topic of this meeting was the sessions for educators, these sessions where exceptional for future educators.

**APS Meeting:** The APS meeting was in San Diego, CA, April 26-30, 2014. This was my last participation as K-12 Minority Outreach Fellow, I tried to make the best use of this opportunity. During the Experimental Biology Teacher Student Workshop and after the keynote speaker; Stan Lindstedt, PhD, I had the opportunity to be part of a career panel in physiology. This activity was a challenge for me; it was my first time taking to high school students about my career path and not about my research. I was impressed by all the students’ questions, from science to language. I participated in the APS Frontiers in Physiology Award’s Luncheon in honor of the Frontiers Research Teachers. Listening to the speech of honored teachers about their APS experience was inspirational and an example about the APS commitment to all levels of education. In addition, I volunteer judge in the Bruce Awards undergraduate poster session. Under a group leader evaluator, a recognized physiologist, I had the opportunity to evaluate undergraduate poster presentation. During the meeting, I also had time to be present at scientific and career development sessions offered by APS and other societies.

**After the K-12 minority outreach fellowship:** This fellowship allowed me to present to high school students in the Puerto Rico and to high school students in San Diego. Students from different backgrounds, but with the same genuine curiosity about science and physiology. At the same time, I confirmed the necessity present in our community to integrate science and physiology with hands on activities. APS is an excellent resource and tool for students and teachers, but some teachers do not know about the site. In my personal perspective, I expect to continue doing outreach activities. One of my long term professional goal is to create a science summer camp for graduating high school students and freshman college students. A science summer camp with the scientific method as a guide. The main objective will be to strength science, math, technology and engineering concepts and to present them graduate school as an option after the undergraduate degree. For the moment, I will continue performing outreach activities in my community, until the day of the science summer camp.