

Student career funded by CARFS: Alexander Acosta

December 2022

The [Center for Advanced Research in Forensic Science](#), an NSF-funded Industry University Cooperative Research Center (IUCRC) at Florida International University, funded my research project “The Miniaturization, Optimization, and Chemometric Evaluation of Colorimetric Tests for the Indication of Hemp-Type and Marijuana-Type Cannabis” throughout my time at Florida International University. This research, performed in the Almirall research group, focused on miniaturizing and optimizing the Fast Blue BB and 4-Aminophenol color tests for rapid and accurate field determination of hemp and marijuana.

Through CARFS, I have been able to use my research to network and collaborate with scientists at the National Institute of Science and Technology (NIST) and the Drug Enforcement Administration (DEA). While at the DEA for an internship, I was able to present the results of the research I had performed while at the Special Testing and Research Facility.



Picture 1. Alexander Acosta presenting at the DEA Special Testing and Research Facility

In addition to the collaborations, I was able to present my research results at the CARFS annual meeting in Livermore, California and at the Southeastern Regional Meeting of the American Chemical Society (SERMACS) in San Juan, Puerto Rico. These conferences not only allowed me to present my findings to the scientific community but gave me the opportunity to network with scientists within the field of forensic science.



Picture 2. (Left) Alexander Acosta presenting his research results at the CARFS Annual Meeting.
Picture 3. (Right) Alexander Acosta presenting his research results at the Southeastern Regional Meeting of the American Chemical Society.

The research funded by CARFS has resulted in two publications regarding the miniaturization and use of the Fast Blue BB and 4-Aminophenol tests. In addition, a patent has been awarded to Dr. Jose Almirall and I for the methodology developed for the Fast Blue BB color test. CARFS has fostered my education throughout my PhD journey and given me opportunities to improve my skills in the field. As a result, I recently successfully defended my dissertation and was able to graduate with my PhD this December. Since graduation, I have been offered and accepted a Toxicologist Trainee position with the Virginia Department of Forensic Science.

By: Alexander Acosta

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