

# MU Chemistry

## year-in-review

Spring 2018

## Faculty and Students Present at National and Regional Meetings



Taylor Maddox, Samantha Garretson, Grayce Behnke, John Sowards, Deben Shoup, Sarah Cole, Ethan Adkins, and Jordan Martinez at the ACS national meeting in San Francisco

Once again, chemistry students and faculty have traveled all over the country in the past year to share their independent research findings and to develop professional skills at national conferences. These trips were made possible by the Babb Trust, which was established by the late professor Dan Babb to support student travel and scholarships.

In March 2017, eight undergraduate students attended the [American Chemical Society National Meeting](#) in San Francisco with professors [Laura McCunn](#) and [Rosallynn Quiñones](#). Deben Shoup, Grayce Behnke, Samantha Garretson, Taylor Maddox, Ethan Adkins, Sarah Cole, and Jordan Martinez all presented posters of their research. Highlights of the trip included taking a cable car to Fisherman's Wharf, cruising the San Francisco Bay, and a tour of Alcatraz Island.

In April 2017, seven students attended the [national meeting of the American Society for Biochemistry and Molecular Biology](#) in Chicago. Armin Garmany, Ramin Garmany, Brandon Murdock, Nick Kegley, Amanda Smythers, and

Drake Securro traveled with professor [John Rakus](#). Hannah Smith presented her research from a collaboration with professor [Rosallynn Quiñones](#) and biology professor [Nadja Spitzer](#) at the [Society for Neuroscience meeting](#) in Washington, DC. Nicole Perry, who works with Prof. Derrick Kolling, attended the [Society of Environmental Toxicology and Chemistry](#) conference in Minneapolis, MN.

The Department sponsored its largest conference trip to date by sending eighteen students and three faculty to the [Southeast Regional Meeting of the American Chemical Society](#) in November 2017. Because the meeting was held in nearby Charlotte, North Carolina, we were able to charter a bus and invite all chemistry majors, from freshmen to seniors, to attend. The students enjoyed a day of special

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## National and Regional Meetings *continued from page 1*

undergraduate programming featuring author and forensic anthropologist [Kathy Reichs](#).

The last big travel event was the 2018 [American Chemical Society Spring National Meeting](#) in New Orleans. Fifteen undergraduates and two master's students attended the meeting, plus one recent graduate. They were accompanied by professors Markiewicz, Morgan, McCunn, and Quiñones. A total of ten posters and three talks on research from Marshall Chemistry labs were presented. The group enjoyed sightseeing in the French Quarter, sampling Creole food, and seeing alligators and other wildlife on a swamp tour.

In April of 2018, Derrick Kolling took four members of his research group: undergraduates Armin Garmany, Ethan Higginbotham, & Annabella Pauley and graduate student Amanda Smythers to the national meeting of the [American Society of Biochemistry and Molecular Biology](#) in San Diego, CA. At the meeting, the students presented 2 posters and 1 oral presentation on their research on algal based biofuels. Aaron Roberts, who works with Dr. Santanam of the medical school, also attended and presented a poster.

Rosalynn Quiñones participated in the [Content Development Conference](#) for the [Chemical Educational Foundation](#) (CEF) in preparation for the "[You Be the Chemist National Challenge](#)" event in July 2017. This is "an interactive academic contest that encourages students in grades 5-8 to explore chemistry concepts and their real-world applications." She also participated in the National Science Foundation sponsored [Art as Context for General Chemistry](#) workshop. Finally, she again served as a facilitator at the ACS Fall national meeting for the American Chemical Society Postdoc to Faculty (P2F) workshop.



Isabella McMillion and Zach Runyon seize a photo opportunity with the ACS mole mascot at SERMACS in Charlotte



Joshua Rawson at the Charlotte SERMACS meeting



Amanda Smythers, Derrick Kolling, Armin Garmany, Annabella Pauley, and Ethan Higginbotham at ASBMB in San Diego



Faculty and students attending the ACS national meeting in New Orleans

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## John Rakus Awarded an NSF EPSCoR RII-Track 4 Fellowship

[John Rakus](#) received a National Science Foundation - [Established Program to Stimulate Competitive Research RII-Track 4 Fellowship](#).

This grant is a new program at NSF and Dr. Rakus was one of only 30 researchers nationwide awarded a fellowship. The EPSCoR program goal is to enhance research infrastructure in states which receive a disproportionately low amount of NSF funding. Track 4 Fellowships give early-career researchers the opportunity to accelerate their research programs by allowing pre-tenured faculty to spend up to six months in the lab of a senior collaborator in a research-intensive lab. The NSF provides the awardee funding for salary, living expenses and research materials which allowed Marshall to hire substitute instructors for Dr. Rakus's classes while he was away.

John spent his fellowship at the University of Georgia from August to February, where he worked in the lab of [Dr. Robert Haltiwanger](#). Dr. Rakus's research interests involve identifying and characterizing proteins with unusual post-translational C-mannosyltryptophan modifications. The fellowship will also allow M.S. candidate Nick Kegley to spend six months in Dr. Haltiwanger's lab to continue working directly with their lab. Overall, Dr. Rakus found this to be a stimulating and beneficial experience which has led to his group pursuing avenues he hadn't previously considered.



## Rosalynn Quiñones Wins Marshall's Distinguished Artists and Scholars Award

[Rosalynn Quiñones](#) won Marshall University's 2018 [Distinguished Artist and Scholars Award](#)

in the category for assistant professors. This award recognizes one faculty member from the entire campus annually for her or his scholarly activity, in terms of dissemination, external funding, and outreach to the broader community. Rosalynn was recognized for her ability to develop research programs in three different areas: interesting educational laboratories for analytical chemistry courses, how drug molecules arrange themselves when they solidify, and coating nanoparticles with specialized acids for potential implantation in the human body. In just five years, Rosalynn has a remarkable two papers on each of these topics. Each has undergraduate or high school student co-authors. In total, Rosalynn has published seven research papers in either traditional or educational journals in just 5 years. This likely places her among the most productive assistant professors in the US. She is also recognized with sharing her research experience with groups as ranging from post-doctoral fellows seeking faculty positions to 5th-8th grade students in the national "You Be the Chemist" challenge. Rosalynn joins [Mike Norton](#) (winner in 2000 for senior faculty in the sciences) as chemistry faculty members winning a DASA Award.



## Derrick Kolling Wins Marshall's John and Frances Rucker Graduate Advisor Award

[Derrick Kolling](#) won the 2018 [John and Francis Rucker Graduate Advisor Award](#) for Marshall's Huntington campus. The award "acknowledge(s) the contributions of

Marshall's outstanding graduate advisors [for their] exceptional service to Marshall's graduate students." The student nomination letter sums up Derrick's mentoring philosophy well. In it, his nominator says "He is patient and generous with his time, making himself available by phone and email both during normal hours and after hours and weekends. But most important, Dr. Kolling simply cares about the success of each of his students and is dedicated to helping each of us achieve success by whatever means he can." The faculty supporting letter says of him "Derrick is a completely dedicated faculty member who takes great interest in his students' development and assists each of them from the moment they begin working with him to well after graduation... For all of his students, Derrick maintains high standards... all of his students [demonstrate] a high level of competence with respect to making oral and poster presentations. They exhibit both poise and content knowledge." Finally, Derrick runs the largest group in the department, composed almost entirely of undergraduate students. His devotion to each of them and the time it takes to mentor them is extraordinary.



Sen. Shelley Moore-Capito with Derrick Kolling and Amanda Smythers

## Amanda Smythers Presents at Posters-on-the-Hill

Amanda Smythers (Biochemistry, '17) was selected to present at the Council of Undergraduate Research's annual [Posters on the Hill](#) in Washington, D.C. Smythers was one of 60 students selected nationwide, 2 of whom were from West Virginia, and presented work she had completed for her undergraduate capstone to members of the WV congressional delegation. While in D.C., Smythers and her advisor, [Derrick Kolling](#), met with WV Representatives McKinley and Jenkins, as well as WV Senators Capito and Manchin. Smythers and Kolling used their time to both discuss their research as well as convey the importance of NSF and NIH research funding, with particular regard to how it affects undergraduate students. At the poster presentation, they also spent time discussing the successful Marshall University Department of Chemistry Undergraduate Summer Research Program with visitors from Germany, who were seeking information and advice for implementing their own programs back home. In their free time, Smythers and Kolling toured the NIH clinical campus and enjoyed the diverse culinary options DC has to offer. Smythers is currently pursuing an M.S. degree in Chemistry at Marshall.

## Transitions

The Department is sad to report the sudden loss of its laboratory manager, Darwin McCunn in September 2017. Darwin joined the department and worked beside his daughter Laura since November 2014 after working in industry for almost 40 years. His good humor, judgement, and friendship have been missed.

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Phillip Alexander retires at the end of the spring semester after having served as a full time instructor since 2008. Phil taught at Buffalo High School followed by Spring Valley High School in Wayne County, WV until his retirement there. He taught summer school and evening chemistry and physics classes at Marshall throughout his time as a high school teacher. As a term faculty member in our Department for almost a decade, he also edited our freshman chemistry manuals and worked with Gary Anderson in the development of our new nursing chemistry course, CHM 205. He has been a delightful colleague and we wish him well as he takes his well-deserved retirement. Phil will not be leaving us entirely, however, as he plans to continue teaching summer school for the foreseeable future.

His son, Wade Alexander, was in transition from graduate school to permanent employment when we hired him in 2016 as our interim stockroom manager. Last summer, the WV state Department of Environmental Protection hired Wade, providing employment consistent with his Master's degree in Environmental Science. He now travels the state working on environmental quality issues. We are grateful that Wade returned to assisted us in training his replacement for months after his departure.

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In part of our on-going effort to provide the best education we can, over the past year, we redefined the job responsibilities of our technical staff. One of those changes was to have our laboratory manager teach one freshman laboratory course per semester. This change would allow the lab manager to be better acquainted with the laboratories we teach. We also upgraded the stockroom manager position to be our safety officer. Manjira Ghosh-Kumar (Biochemistry Ph.D. The Catholic University of America) joined our department last August as our new "Research Service Facility Manager." Most recently, Manjira was a post-doctoral fellow in Mike Norton's research lab and has also taught for one year at Drury University as a visiting faculty member. J. Elaine Martino joins us as our new Laboratory Manager. Elaine has an M.S. in Safety Management from Marshall University. Prior to starting at Marshall, Elaine worked extensively in the private sector, most recently as a Safety and Health Supervisor with America Electric Power.

## Alpha Chi Sigma Update



The Gamma Eta Chapter of the Alpha Chi Sigma Fraternity has continued with community involvement and has begun to dip its toes into campus involvement. The chapter has been working with members of the Housing and Residence Life staff, specifically in the first-year community in order to spread the word of all that it offers: tutoring, friendship, and fun. Last semester we continued to do some volunteering with the Ronald McDonald House, including helping them to decorate for the winter holiday season. In the fall semester the chapter also worked in conjunction with the campus community by collecting materials to help with hurricane disaster relief in Puerto Rico. AXΣ has also had science magic show stations at Marcum Terrace, St. Joe's, and also helped with the Halloween Bash in the science building last semester.

The brothers have also been helping the department by calling the future chemistry majors to confirm with them if they were going to attend the university and if they planned to be science majors. AXΣ members have also continued to be the most involved by being Learning Assistants and Teaching Assistants.

The chapter has also been extending brotherhood bonds with the Gamma Nu chapter at Ohio University in Athens. Brothers have helped with their initiations and also with community service events like their Science Saturday.

– Megan Weber, Master of Ceremonies

## Our Vision

*To be known as one of the top undergraduate programs in the nation by integrating teaching with research experience.*



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