



SIUE undergrad secures research funding through competitive national competition

by Megan Wieser
June 13 2017 10:29 AM



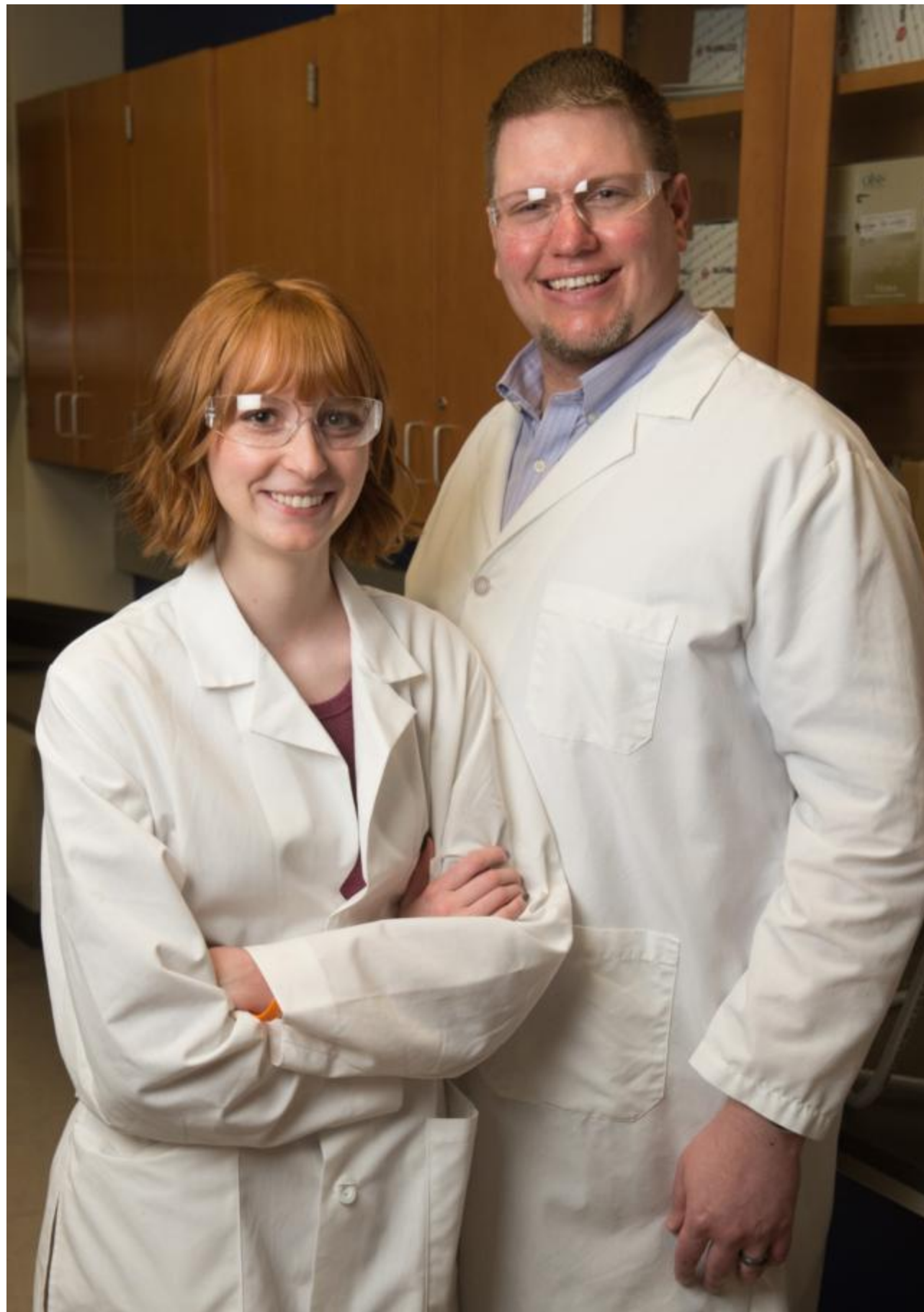
EDWARDSVILLE - The Sigma Xi Grants-in-Aid of Research (GIAR) program has awarded \$1,000 to Southern Illinois University Edwardsville's Rachel Davis for her environmental, analytical chemistry research. Davis, of Galatia, is a senior chemistry major in the College of Arts and Sciences.

Sigma Xi GIAR grants are highly competitive, with just a 15 percent acceptance rate. The grants are for small starter funds for projects initiated by undergraduate and graduate students with an average of \$650 awarded.

Davis' research focuses on the detection of pharmaceutical and personal care products in the environment, such as waterways and surrounding soil.

“Contaminants in the environment pose threats to organisms, and I study these effects in flatworms and Fathead minnows,” she said. “Chemistry is the central science of the world, and daily I am capable of not only studying, but also applying everything I’ve learned into my research and in my future career.”

Davis has participated in SIUE’s Undergraduate Research and Creative Activities (URCA) as an assistant helping with the research of her mentor Kevin Tucker, PhD, assistant professor in the Department of Chemistry. This fall, she will be an URCA associate, which will provide the opportunity to lead her own research project.



“As an URCA associate, I will be modeling the uptake of Endocrine Disrupting Compounds (EDCs) in Fathead minnows at environmentally relevant concentrations to determine the accumulation in the whole fish, and specifically in which tissues accumulation occurs,” she said.

Tucker emphasizes Davis’ impressive list of research accomplishments as an undergraduate. In addition to her receipt of Sigma Xi GIAR funding and involvement in the URCA program, she has presented a poster at the Emerging Contaminants in the Aquatic Environment Conference in Champaign, and has been a co-author on two talks presented by Tucker. She has also co-authored four posters presented by other lab members in the past nine months.

“It is amazing what can happen when students are given the opportunity to grow,” Tucker said. “I have supported Rachel just as I have supported the other students in my research lab. I’ve offered her the opportunity to become an independent, self-motivated, self-managed scientist. Students thrive when given the opportunity to see how much they are capable of, and I have certainly seen this happen with Rachel.”

“It is especially important to support undergraduate research activities, because while faculty can teach concepts, ideas and principles through the classroom and instructional laboratory, the most difficult thing to teach in those situations is independence from the faculty member,” he added. “A student, who learns to have new ideas and evaluate or test those ideas for themselves, will be a more highly sought job applicant or graduate /professional school student when they matriculate.”

After graduating from SIUE in May 2018, Davis plans to attend medical school and later pursue a career as a physician.

“Attending SIUE the past three years has pushed me further into my education than I ever thought was possible,” Davis said. “Without the help and guidance of professors, I never would have had the confidence to work this hard on my education.”

Central to SIUE’s exceptional and comprehensive education, the [College of Arts and Sciences](#) has 19 departments and 85 areas of study. More than 300 full-time faculty /instructors deliver classes to more than 8,000 undergraduate and graduate students. Faculty help students explore diverse ideas and experiences, while learning to think and live as fulfilled, productive members of the global community. Study abroad, service-learning, internships, and other experiential learning opportunities better prepare SIUE students not only to succeed in our region's workplaces, but also to become valuable leaders who make important contributions to our communities.