

School of Molecular Sciences hosts NSF Research Experiences for Undergraduates program

Students from across U.S. gain valuable experience over 10 weeks

June 22, 2023

Faculty in Arizona State University's School of Molecular Sciences (<https://sms.asu.edu/>) welcomed undergraduate students from across the country to the Tempe campus to participate in a 10-week research program funded by the National Science Foundation (NSF).

The program, Research Experiences for Undergraduates (<https://onsa.asu.edu/scholarship/research-experiences-undergraduates-reu>), or REU, sponsors eight students, sophomores and juniors to conduct research with scientists at some of the country's leading research institutions.



Research Experiences for Undergraduates attendees with School of Molecular Sciences faculty and graduate-student mentors.

Photo by Mary Zhu/School of Molecular Sciences

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The students, who generally come from liberal arts and community colleges, receive one-on-one mentorship as they work on research projects with school faculty and graduate students. REU students also attend professional development seminars, participate in weekly meetings and interact with research scientists from companies such as GSK, Gilead and Merck. At the end of the program, students present their results to a large audience of scientists who ask questions and provide feedback.

Students from last year's REU program at ASU received multiple offers from competitive graduate schools, including University of Michigan, Purdue, UNC Chapel Hill, University of Wisconsin-Madison, Ohio State University, University of Illinois Urbana-Champaign and Arizona State University.

Associate Professor Ryan Trovitch (<https://search.asu.edu/profile/1822261>), a principal investigator on the project, is pleased with the continued strength of the program.

"This year, like last year, we had approximately 170 undergraduate students from around the country apply for the eight REU positions. These students already have very impressive accomplishments, and most would make outstanding graduate students in our programs."

Gina, a current REU participant, plans to do just that. A student at Mesa Community College in MyPath2ASU, she said she's inspired by the research opportunities ASU offers.

"This program has raised my awareness about the opportunities my future holds, whether in academia or in industry. I am learning so much, and being able to work with world-class researchers is an invaluable experience that I am very grateful to have."

All of the students in the program are enthusiastic and appreciative of the experience.

"As a major university, ASU has research equipment that my home institution doesn't have. This program allows me to do experiments and work with scientists who are on the cutting-edge of research," said Jenna, a student at Bryn Mawr College. "I like how hands-on it is. I work on my own project, and I'm held accountable for my results. I'm surrounded by great people who support me and are involved in the research I'm doing."

Cheyenne, who is Native American, plans to pursue a career in the biomedical sciences so she can help Indigenous youths have better access to medical and educational opportunities.

"This program is giving me hands-on laboratory experience, but also helping me to figure out my future. I want to pursue higher education to be in a position to help others, especially on the reservation where I grew up."

Ethan, a student at Cal Poly Pomona, had other research opportunities for this summer, but chose ASU's REU program.

"I wanted to get out of my comfort zone and do research that can help society and the environment. It's exciting and meaningful to help develop catalysts that can build polymers without harmful or toxic waste. Research at ASU with Professor Trovitch gives me that opportunity."

Laura Ackerman-Biegasiwicz, also a principal investigator for the REU program, observed: "It is so rewarding to work with such high-caliber and enthusiastic students who don't always have the exposure or access to the same research or training at their home institutions. Pairing diverse students with our

diverse group of faculty and research teams allows everyone to gain experience as researchers and as people in a supportive and inclusive environment. A large part of the program is community building and ensuring that the students have the chance to explore Arizona together."

In addition to Trovitch and Ackerman-Biegasiewicz, School of Molecular Sciences researchers Kyle Biegasiewicz, Christina Birkel, Matthias Heyden, Anne Jones, Audrone Lapinaite, Don Seo, Wade Van Horn and Jeremy Mills serve as program mentors who work one-on-one with the REU students.

"We appreciate the opportunity NSF gives us to have this REU program," Ackerman-Biegasiewicz and Trovitch said in a joint statement. "Everyone benefits from it; students and faculty alike are inspired by the creativity and invigorating excitement the program provides. It's always an honor to train these bright, young students who leave Tempe with meaningful experiences and return their home institutions with a future career in sight."

"We are fortunate to be able to host this future generation of scientists," said Kenro Kusumi, dean of natural sciences. "ASU is committed to the overall health of the communities it serves, and giving talented students these research experiences through this REU program is a key part of our efforts."



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