

Doing Real Science

DISCOVERY ZONE, STEM EDUCATION, ACADEMICS, RESEARCH

Among the research discoveries to come out of the College of Natural Sciences last year was one about some researchers themselves — specifically, the UT Austin freshmen and sophomores who join the college's Freshman Research Initiative. The nation's largest undergraduate research program at a university, the FRI puts 900 students a year to work on faculty members' real-world research questions. Students choose projects from more than 25 research areas, such as working to develop diagnostic tools for the Zika virus, program autonomous robots, create biofuels or identify the chemical signals in wine.

In a study published in CBE-Life Science Education in June, scientists compared thousands of UT Austin students — 2,499 in the FRI and a carefully matched group of non-participants — and found FRI students had dramatically higher odds of completing a science, technology, engineering or math (STEM) degree. They also were significantly more likely to graduate within six years.

*Credit: Marsha Miller*

For every 10 students who participated in FRI, two more graduated than would have otherwise — and three more graduates secured a degree in a STEM field, instead of changing majors.

"Many science educators have suspected that early exposure of undergraduates to the process of doing real science would have educational benefits," said Nobel laureate Carl Wieman, a Stanford University physics and education professor, who did not participate in the study. "This study provides the first good evidence, with a large and diverse population of students, that such exposure through undergraduate research has dramatic benefits for all students.... Every university ought to be looking closely at these results as they think about how to improve the quality of STEM education."

[See more on the study, student testimonials and our video.](#)



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