

# Young, gifted, first-generation minority science students motivated by prosocial values

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There are as many motives as there are undergraduates taking introductory science courses, but if you look closely at groups of freshmen science students such as those from underrepresented minority (URM) backgrounds, you can see striking motivational differences across and within these groups. That's a major finding in a new survey of 249 freshmen by psychology researchers in California.

The researchers found that those who entered undergraduate science studies with a strong belief that science could help members of their communities were more likely to identify as being scientists over time. But this held true only for URM first-generation college students, that is, URM freshmen who were first in their families to enroll at the college level. Students from all groups were highly motivated by traditional science values, such as curiosity and passion for discovery. But this "prosocial" outlook, say the researchers, was also a prime motivator for URM first-generation students' desire to pursue science careers. Yet looking across all URM science students, combining first-generation students with those from families with college or higher educational backgrounds, the researchers found a greater connection between broader prosocial goals and their reasons for pursuing a science degree or career. Seeing opportunities to fulfill these prosocial goals can be more important for URM students in science fields than for students who are traditionally well-represented.

These are among the findings of a new study of URM student motivation just published in the journal *CBE-Life Sciences Education* (LSE), by psychology researchers Matthew C. Jackson, Gino Galvez, and Isidro Landa, plus organic chemist Paul Buonora at California State University, Long Beach, and psychologist Dustin B. Thomas at San Diego State University. These findings, say the authors, demonstrate that all students, even within a definable subgroup, can have differing motives and career ideals. Taking these "intersectional identities" into account, the researchers say, undergraduate science educators should pay attention to culturally connected career motives within URM communities to "make science matter" to them.

Published by the American Society for Cell Biology, LSE is an open-access journal fostering excellence in life science education through peer-reviewed education research and evidence-based teaching. The special issue on broadening participation was edited by Kenneth Gibbs, Program Analyst at the National Institute of General Medical Sciences, National Institutes of Health, in Bethesda, MD, and Pat Marsteller, Department of Biology at Emory University in Atlanta, GA.

All the research papers published in this issue, say the editors, are aimed at promoting diversity, equity, and inclusion in "a vibrant scientific enterprise that continues to harness the contributions of those from traditionally well-represented backgrounds while fostering full participation and engagement of those from other backgrounds (e.g., women, racial and ethnic minorities, people with disabilities, sexual and gender minorities, first-generation [students](#), those from low-income backgrounds, etc.)."

**More information:** *CBE-Life Sciences Education* [DOI: 10.1187/cbe.16-01-0067](https://doi.org/10.1187/cbe.16-01-0067)

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