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**HOW INCREASING EQUITY IN THE  
BIOLOGY CLASSROOM DRIVES SOCIAL  
CHANGE**



Despite institutional efforts to promote diversity on college campuses and classrooms, student performance and retention in biology and other science disciplines can still be predicted by categorical descriptors of an individual's identity (e.g., minority status, gender, whether they are the first generation in their family to attend college). Because college entrance exams resemble the high-stakes exams which determine performance in introductory science classes, and because grades in such classes can be influential in determining students' educational trajectory, incoming preparation might have far-reaching impacts. I will discuss an analysis of a unique dataset across two science colleges at a large public institution, with disaggregated classroom assessment data, along with survey data. Using structural equation modeling, we studied the mechanisms that underlie class performance gaps and attitudes among incoming students in science. We identified incoming preparation as the chief culprit in explaining the persistent gaps in performance among those under-represented in science, and I will discuss other factors that contributed. These data, along with past research, underscore the importance of evidence-based instructional practices, bridge programs, and a reduced reliance on one or few high-stakes exams to assess student performance in large introductory science courses.