

Antiracist Recommendations from the National Academies of Sciences, Engineering, and Medicine Include Contributions from CienciaPR ^[1]

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Portada del informe “Advancing Anti-Racism, Diversity, Equity, and Inclusion in STEMM Organizations”

WASHINGTON, DC – A new report from the National Academies of Sciences, Engineering, and Medicine (NASEM) recommends that higher education institutions and organizations in science, technology, engineering, mathematics, and medicine (STEMM) move intentionally to dismantle policies, practices, and cultures that empower and privilege white people over people from groups that have been historically minoritized or marginalized.

The study, titled “Advancing Anti-Racism, Diversity, Equity, and Inclusion in STEM Organizations [3],” summarizes decades of documentation and scientific evidence showing how the legacy of racism in the US has affected full participation in science and medicine. At the same time, it provides concrete recommendations, based on expert consensus, for individuals, group and organizational leaders, and organizations to establish environments that foster equity, inclusion, and diversity in the sciences.

During a virtual presentation on the report, Dr. Marcia McNutt, president of the National Academy of Science, stressed the importance of the report and that it represents the first time the prestigious scientific institution she leads has issued a report focused on anti-racism. She also mentioned that the creation of the report was prompted by the murders of George Floyd and countless other Black people at the hands of police in the United States.

The report was developed by an interdisciplinary committee of experts convened by the National Academies of Sciences, Engineering and Medicine [4], which worked an entire year to produce the important consensus study. Puerto Rican scientist, Dr. Giovanna Guerrero Medina, was chosen to be a member of this committee thanks to her expertise and leadership as executive director of the organization Ciencia Puerto Rico (CienciaPR).

Participation is Not Enough

The report highlights that increasing the numerical participation of minoritized racial and ethnic groups in STEMM is not enough to correct the deficiencies in institutions and organizations and that therefore it is necessary to act to change their cultures and organizational environments.

According to the study, the removal of barriers that prevent access to STEMM education and careers, as well as the application of practices that encourage belonging to individuals from marginalized groups, must be done together to sustainably foster a culture of inclusion, prosperity and success in science and medicine.

"To achieve anti-racism, diversity, equity and inclusion, a simple checklist is not enough," said Dr. Gilda Barabino, president of the Olin School of Engineering, professor of biomedical and chemical engineering, and co-chair of the committee who wrote the report. "Rather, the goal is to create environments centered on inclusive excellence, where all participants have access to educational and career opportunities, feel included, and have the resources they need to realize their full potential."

Although people from minoritized groups make up a growing portion of the US population, that growth has not been matched by a similar increase in STEMM education and careers among these groups, the report notes. These differences do not reflect the abilities or interests of individuals. Rather, data shows that the root cause is that people from historically marginalized groups face numerous barriers that negatively affect their access, representation, and ability to thrive in STEMM careers. The study documents, for example, how biases at the individual and interpersonal levels influence who is considered excellent in science or how welcome people from minoritized groups feel in work or study teams. It also describes how institutions perpetuate disparities established through centuries of racism in the US.

"The history of systemic racism in the United States—both written laws and policies, as well as a culture of practices and beliefs—has harmed Blacks, Native Americans, Latines, Asian Americans, and other people from minoritized racial and ethnic groups. This pattern continues to this day," said Susan Fiske, co-chair of the committee and a professor of psychology and public affairs at Princeton University. "STEMM organizations operate within that larger national story."

The report recommends that organizations make changes to their policies and practices at the individual, team, and organizational levels. Recommendations include creating accountability systems within institutions for hiring, admissions, and promotion decisions, among others, to identify patterns of bias. Team leaders in STEMM work and research training settings are encouraged to implement strategies to establish environments where people feel psychologically safe and that promote equal status among team members. The report also emphasizes the need to dedicate adequate resources in terms of hours, personnel, and funds, to carry out the necessary organizational and cultural changes. The entire list of recommendations is available [on the report's website](#) [3].

Lessons From and For Puerto Rico

Study member, Dr. Giovanna Guerrero Medina, affirms that the report includes lessons and recommendations of relevance to all jurisdictions and communities in the US, including Puerto Rico. "Racism has definitely affected the perception, participation, and prosperity of Puerto Ricans in the US, and science and medicine are no exceptions. Similarly, Puerto Ricans must confront our own legacy of racism and colorism and do everything in our power so that everyone among our community can see themselves reflected in the sciences and have access to these careers that provide economic and social benefits," said the Puerto Rican neuroscientist.

The report includes the example of Ciencia Puerto Rico as an organization that acts intentionally to break down scientific stereotypes and create a cultural change in science. "The CienciaPR community is specifically mentioned as an example of how communities of historically marginalized groups have found ways to change the narrative about 'who does science' and 'who owns science.' Furthermore, the strategies that CienciaPR uses to create learning and mentoring communities and a critical mass that influences change are also part of the recommendations on how to establish more inclusive institutional environments and programs in the sciences," stated Dr. Guerrero Medina.

Given their important role in diversifying the sciences, minority serving institutions of higher learning, including educational institutions in Puerto Rico, are also mentioned as organizations that should be emulated, studied, and supported with more federal and philanthropic funds. The report encourages predominantly white educational institutions to establish reciprocal and sustainable partnerships with institutions that predominantly serve African Americans, Latines, Native Americans, and others.

"The strengths of Puerto Rican science, and the lessons we have learned through CienciaPR for how to reclaim our role and space in science, were well represented in the committee's deliberations," indicated Dr. Guerrero Medina.

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