



Published in final edited form as:

Science. 2020 September 11; 369(6509): 1313–1314. doi:10.1126/science.abd4842.

NIH must confront the use of race in science

Michael Yudell^{1,*}, Dorothy Roberts², Rob DeSalle³, Sarah Tishkoff⁴,
70 signatories

¹Department of Community Health and Prevention, Drexel University School of Public Health, Philadelphia, PA 19104, USA.

²Law School and Departments of Africana Studies and Sociology, University of Pennsylvania, Philadelphia, PA 19104, USA.

³American Museum of Natural History, New York, NY 10024, USA.

⁴Department of Genetics and Biology, University of Pennsylvania, Philadelphia, PA 19104, USA.

Recent protests across the United States and the world have called attention to anti-Black racism in policing, employment, housing, and education. Science and medicine also have long histories of racism (1, 2). This unfortunate yet persistent aspect of science and medicine includes the use of obsolete concepts of race to measure human biological difference and the false belief, by some, that differences in disease outcomes stem primarily from pathophysiological differences between racial groups (3, 4).

We are particularly concerned that explanations for the disproportionate rates of coronavirus disease 2019 (COVID-19) in Black, Latino, Indigenous, and other communities of color will mistakenly point to innate racial differences instead of long-standing institutionalized racism and other underlying social, structural, and environmental determinants. Although genetic risk factors may contribute to severity of COVID-19 (5, 6), race is a poor proxy to understand the population distribution of such risk factors (7). Compelling evidence shows that racism, not race, is the most relevant risk factor (8, 9). We are hopeful that scientists will not turn to racial science—a reflection of long-standing beliefs about superiority and inferiority that have no place in scientific and clinical practice (1, 10)—to explain COVID-19 disparities and justify policy responses to it. However, racial categories have been misused in the past.

In 2016, we called for the elimination of the use of race as a means to classify biological diversity in both laboratory and clinical research. Since that time, little has changed (11). The National Institutes of Health (NIH) made progress by releasing a request for applications in support of research leading to the creation of best practices for the study of race and other population identifiers (12). However, R01 awards could take years to address these issues, and NIH still offers no guidance about the use of racial and ethnic identifiers in research beyond recruitment. There is an urgent need for NIH to provide scientists with

*Corresponding author. myudell@drexel.edu.

SUPPLEMENTARY MATERIALS

List of signatories www.sciencemag.org/content/369/6509/1313/suppl/DC1

information about what utility racial data have beyond fostering diversity in research, how such information should or should not be used in data analysis, and what identifiers of human populations might be better suited for use in biomedical research.

To begin to address the misuse of racial measures in scientific and clinical practice, we urge the director of NIH to lead education efforts directed at both scientists and the public about the nature of human genetic diversity and the ongoing need and obligation to confront racism in science. In these troubled times, a clear statement regarding use and misuse of population identifiers in the pursuit of characterizing human difference could help alleviate ongoing and widespread confusion on such matters.

NIH should then support the National Academy of Sciences to bring together a diverse group of scientists and scholars to develop a consensus statement on best practices in genetic, clinical, and social scientific studies for characterizing human genetic diversity, including guidance for using racial categories to study racism's impact on human health. Guidelines for federally funded science should also include best practices for the integration of biological, social, structural, and environmental health determinants into the study of human health and disease.

NIH should continue and expand its work to hire more career scientists and clinicians from underrepresented minority groups. It should also substantially increase the extramural funding that supports scientists from underrepresented groups at every level of training and throughout career development. We have the tools to remedy this challenge. The time to act is now.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

REFERENCES AND NOTES

1. Roberts D, *Fatal Invention: How Science, Politics, and Big Business Re-Crete Race in the Twenty-First Century* (The New Press, New York, 2012).
2. Hammonds EM, Herzig RM, *The Nature of Difference: Sciences of Race in the United States from Jefferson to Genomics* (MIT Press, 2008).
3. Graves JL Jr., *The Emperor's New Clothes: Biological Theories of Race at the Millennium* (Rutgers University Press, New Brunswick, NJ, 2001).
4. Vyas DA, Eisenstein LG, Jones DS, *Engl N. J. Med* 10.1056/NEJMms2004740 (2020).
5. Ellinghaus D. et al., *N. Engl. J. Med* 10.1056/NEJMoa2020283 (2020).
6. Hooper MW, Nápoles AM, Pérez-Stable EJ, *JAMA* 323, 24 (2020).
7. Yancy CW, *JAMA* 323, 19 (2020). [PubMed: 31825458]
8. van Dorn A, Cooney RE, Sabin ML, *Lancet* 395, 10232 (2020).
9. Wallis C, "Why racism, not race, is a risk factor for dying of COVID-19," *Scientific American* (2020).
10. Duster T, *Science* 307, 1050 (2005). [PubMed: 15718453]
11. Yudell M, Roberts D, DeSalle R, Tishkoff S, *Science* 351, 564 (2016). [PubMed: 26912690]
12. Ethical, Legal and Social Implications (ELSI) Research (R01 Clinical Trial Optional) (Department of Health and Human Services, 2020); <https://grants.nih.gov/grants/guide/pa-files/PAR-20-254.html>.



A member of the Black Doctors COVID-19 Consortium, formed to help address health disparities in the African American community, tests a patient. Racial disparities in COVID-19 cases are better explained by structural racism than by genetic differences.