Underrepresented Populations in the U.S. Biomedical, Clinical, Behavioral and Social Sciences Research Enterprise

Despite tremendous advancements in scientific research, opportunities in science education, bench research, and medical care remain unavailable to some. NIH encourages educational institutions to diversify student and faculty populations to enhance the participation of individuals from groups that are underrepresented in the biomedical, clinical, behavioral, and social sciences, such as:

A. Convincing evidence from the National Science Foundation indicates that individuals from racial and ethnic groups are nationally underrepresented in health-related sciences (see data at http://www.nsf.gov/statistics/showpub.cfm?TopID=2&SubID=27) and the report Women, Minorities, and Persons with Disabilities in Science and Engineering). These sources indicate that Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, Native Hawaiians, and other Pacific Islanders are highly underrepresented in the biomedical sciences. Because underrepresentation can vary from setting to setting, the NIH encourages grantee institutions to encourage individuals from underrepresented racial or ethnic groups to participate in NIH programs to enhance diversity. For more information on racial and ethnic categories and definitions, see the OMB Revisions to the Standards for Classification of Federal Data on Race and Ethnicity (https://www.govinfo.gov/content/pkg/FR-1997-10-30/html/97-28653.htm).

B. People with physical or mental impairments that substantially limit one or more major life activities, as described in the Americans with Disabilities Act of 1990, as amended, are considered Individuals with Disabilities. See NSF data at, https://www.nsf.gov/statistics/2017/nsf17310/static/data/tab7-5.pdf.

C. Individuals from disadvantaged backgrounds meet ***two or more*** of the following criteria:
    1. Were or currently are homeless, as defined by the McKinney-Vento Homeless Assistance Act (Definition: https://nche.ed.gov/mckinney-vento/);
    2. Were or currently are in the foster care system, as defined by the Administration for Children and Families (Definition: https://www.acf.hhs.gov/cb/focus-areas/foster-care);
    3. Were eligible for the Federal Free and Reduced Lunch Program for two or more years (Definition: https://www.fns.usda.gov/school-meals/income-eligibility-guidelines);
    4. Have/had no parents or legal guardians who completed a bachelor's degree (see https://nces.ed.gov/pubs2018/2018009.pdf);
    5. Were or currently are eligible for Federal Pell grants (Definition: https://www2.ed.gov/programs/fpg/eligibility.html);
    6. Received support from the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) as a parent or child (Definition: https://www.fns.usda.gov/wic/wic-eligibility-requirements).
    7. Grew up in one of the following areas: a) a U.S. rural area, as designated by the Health Resources and Services Administration (HRSA) Rural Health Grants Eligibility Analyzer (https://data.hrsa.gov/tools/rural-health), ***or*** b) a Centers for Medicare and Medicaid Services-designated Low-Income and Health Professional Shortage Areas (qualifying zip codes are included in the file). Only one of the two possibilities in #7 can be used as a criterion for the disadvantaged background definition.

Students from low socioeconomic (SES) status backgrounds have been shown to obtain bachelor's and advanced degrees at significantly lower rates than students from middle and high SES groups (see https://nces.ed.gov/programs/coe/indicator_tva.asp). They are subsequently less likely to be represented in biomedical research. For background see Department of Education data

at, https://nces.ed.gov/; https://nces.ed.gov/programs/coe/indicator_tva.asp; https://www2.ed.gov/rschstat/research/pubs/advancing-diversity-inclusion.pdf.

D. Literature shows that women from backgrounds in categories A, B, and C face particular challenges at the graduate level and beyond in scientific fields. (See, e.g., From the NIH: A Systems Approach to Increasing the Diversity of Biomedical Research Workforce https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5008902/).

Women are underrepresented in doctorate-granting research institutions at senior faculty levels in most biomedical-relevant disciplines, and underrepresented at other faculty levels in some scientific disciplines (See data from the National Science Foundation National Center for Science and Engineering Statistics: Women, Minorities, and Persons with Disabilities in Science and Engineering, special report available at https://www.nsf.gov/statistics/2017/nsf17310/, especially Table 9-23, describing science, engineering, and health doctorate holders employed in universities and 4-year colleges, by broad occupation, sex, years since doctorate, and faculty rank).