

## EXPANDING THE MINORITY BIOMEDICAL PIPELINE: THE NIDDK NATIONAL HIGH SCHOOL STUDENT SUMMER RESEARCH PROGRAM

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In January 2005 at a two-day conference on women and minorities in the science and engineering workforce, Harvard University President Lawrence Summers made his infamous remarks speculating that female scientists may have difficulty achieving tenured faculty positions because of innate differences in aptitude. Summers said he was only putting forward hypotheses based on the scholarly work assembled for the conference, and not expressing his own judgments. However, his comments and the ongoing work he summarized reinforce the pervasive and persistent attempts to “scientifically” support intellectual inferiority and rationalize discriminatory behaviors.

A number of universities, including Harvard, have taken steps such as specialized task forces and offices of diversity to try to improve the climate for female and minority scientists. Despite these efforts there has been little change. The representation of Blacks among tenured and tenure-track investigators at the National Institutes of Health has actually fallen in the past decade, from 2% and 4.5%, respectively, to 1% and 1.5%.<sup>1,2</sup> In California, the most ethnically diverse state in the nation, less than 3% of University of California faculty are Black or Hispanic. Indeed, a 2002 report of faculty diversity noted African Americans comprised only 1% of the total number of tenured and tenure-track investigators in the top 50 academic institutions in the United States.<sup>3</sup> The National Science Foundation reported US-born Blacks held just 4.4% of science and engineering (S&E) jobs requiring the minimum of a bachelor’s degree. US-born Hispanics account for even less, 3.4% of S&E positions, and Native Americans hold just 0.3% of S&E jobs. Each group is under-represented by 3–4 fold in comparison to their proportion in the US population. The situation is even worse at the PhD and professorial level.<sup>4</sup>

In April 2003, the Sullivan Commission on Diversity in the Healthcare Workforce was convened to address the paucity of

minorities in health professions, despite America’s increasing diversity. The Commission presented its findings in a report entitled “*Missing Persons: Minorities in the Health Professions.*”<sup>5</sup> Among the Sullivan Commission’s 13 specific recommendations to address the health disparities pipeline, the first included “to provide students with classroom and other learning opportunities for academic enrichment in the sciences.” This report is a key element in the nation’s strategy for achieving diversity in the health professions. The report emphasized the need to provide an array of opportunities to minority students interested in the health professions. The Institute of Medicine has also recognized the need for diversity in both the biomedical sciences and health professions to help address these disparities, the magnitude of which is not commonly appreciated.<sup>6</sup> A diverse environment can make for novel and innovative science brought about via the richness of different approaches and experiences, and can add to the robustness of proposals and solutions, making diversity a tool for success in the academics and industry.<sup>7,8</sup> As suggested by Dr. Jordan Cohen, former president of the Association of American Medical Colleges, as long as our academic medical and scientific institutions have only token representation from the richly diverse American culture, and as long as faculty advancement, for whatever reason, is grossly distorted by gender, race and ethnicity, the scientific and medical professions cannot truly lay claim to the ethical and moral high ground they profess to occupy.<sup>9</sup>

### THE WAY FORWARD

Increasing the nation’s cadre of minority clinicians and researchers is a crucial component to providing the opportunity to maintain a high level of scientific productivity and effective medical advances. As part of the Strategic Plan on Minority Health Disparities, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has developed a series of programs aimed at increasing underrepresented minority health professionals, especially those in biomedical research. The National High School Student Summer Research Program (NHSSSRP) is the earliest of these in the biomedical pipeline. The goal is to increase the pool of promising, disadvantaged

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(mainly but not limited to underrepresented minorities and females) students early in the pipeline where primary and secondary schools are failing too many. Many racial and ethnic minority students receive a measurably lower quality K-12 education than White students, score lower on standardized tests, and are less likely to complete high school. Given the present academic environment, it is easy to see why Hispanic (11%) and African American (17%) students are much less likely to graduate from a four-year college than White students (30%).<sup>10</sup>

The NHSSSRP provides mentorship, inspiration and academic enrichment in the sciences by linking promising young students with established researchers and supporting them to perform high-quality research. As an added incentive for participants in the program they are invited to the NIH campus for a workshop in which they share with each other their accomplishments and form peer networks. The students and mentors were encouraged to prepare the manuscripts that are contained in this issue of the supplement to the journal *Ethnicity and Disease*. Due to the limited time period for the program, these manuscripts are not traditional peer-reviewed publications, but represent a first step for many toward participation in the rigors and enjoyment of scientific

communication. It is our intention to gather these manuscripts immediately at the conclusion of the program in the summer and prepare them for publication soon thereafter. We congratulate the students and mentors who have contributed the manuscripts to this issue, and look forward to future issues.

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