NIDDK’s Short-Term Research Experience for Underrepresented Persons (STEP-UP) Program

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Abstract

This abstract provides an overview to this issue.

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The opportunity to explore and experience firsthand career and research opportunities is integral for children and teenagers to consider future careers. The importance of these opportunities is magnified considering the ever-changing economy and the impacts of technology in the workforce where the skills learned in training can become obsolete in short order. Training students in careers and pathways that focus on problem solving and critical analysis provides students with skills needed for success; these skills are inherent in biomedical research.

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) launched the Short-Term Research Experience for Underrepresented Persons (STEP-UP) Program over 20 years ago to provide immersive internships to high school and undergraduate students to provide these types of experiences. The program was designed and continues to provide opportunities to individuals historically underrepresented in the biomedical research workforce to address the gap in representation between individuals suffering from disease burdens and the individuals pursuing cures and providing care. For example, the 2017 National Diabetes Statistics Report confirms that a disproportionate burden of Type II Diabetes exists among several population groups, including American Indians and Alaska Natives, African Americans and Hispanics/Latinos (1). These racial and ethnic groups continue to have a much higher incidence rates of type II diabetes than the majority population, and are also significantly underrepresented in the U.S. biomedical research and health care workforce. African Americans, Hispanics and Native Americans together make up 25% of the U.S. population, but unfortunately these groups make up only a very small fraction of the nation’s biomedical research workforce that addresses these maladies. To address this disparity STEP-UP facilitates intensive high-quality summer research experiences to individuals that are underrepresented minorities, disabled, or socioeconomically disadvantaged. Operated through research grants to University and Research Institutions the program provides high school and undergraduate students with an immersive 8 to 10-week summer research internship with
mentorship from accomplished biomedical researchers throughout the nation. A key component of the program is for high school students to pursue research opportunities close to their home so that they can share their discoveries within their community. At the end of the summer the STEP-UP students participate in a Research Symposium on the campus of the National Institutes of Health (NIH) in Bethesda, Maryland and share with their colleagues and NIH researchers their research experiences over the summer.

NIDDK’s investment in STEP-UP is paying noticeable dividends as evidenced from early evaluation results that show positive correlations between participation in the STEP-UP program and later careers as researchers, physicians, and physician-scientists. One summer of STEP-UP alone does not produce future researchers but it appears to encourage research for some students and further strengthen a desire for research in others. The following abstracts are from the research that STEP UP high school students pursued over the summer of 2018 and their accomplishments over a very short time in the lab. We invite you to enjoy these abstracts, and if you have additional questions please visit our website at https://stepup.niddk.nih.gov.

REFERENCE