

ACADEMIA | Letters

Addressing a lack of African American representation in biomedical research: Jackson State University Jackson Heart Study Graduate Training and Education Center

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Introduction

It has been widely reported that racial and ethnic minorities in the United States carry a disproportionate share of cardiovascular disease burden.[1,2] While the Jackson Heart Study (JHS) was developed as a longitudinal investigation of genetic and environmental risk fac-

tors associated with the disproportionate burden of cardiovascular disease (CVD) in African-Americans, nationwide data continue to show a shortage of underrepresented minorities in key public health and biomedical careers, as well as a low chance of underrepresented minorities, especially, African Americans, being awarded grants to conduct independent research.[3,4] The purpose of this report is to share the contributions of Jackson State University (JSU) and its JHS investigators towards increasing the interest and representation of African American scholars in biomedical research, and ultimately in public health and biomedical careers.

Methods

The JSU JHS Graduate Training and Education Center (GTEC) team includes Dr. Clifton Addison, Dr. Gregory Wilson, Dr. Brenda Jenkins, Dr. Monique White who have been foundation members of the JHS team, having worked, not only to develop the JHS from the beginning stages of the study, but also develop the JHS Coordinating Center,[5] the first of its kind at a HBCU. In addition, the GTEC team includes the renowned, Physician, Epidemiologist, Public Health Scientist, Dr. Marinelle Payton, who currently serves as the Chair of the Department of Epidemiology and Biostatistics and PI of GTEC. The team of JSU investigators have worked tirelessly to make groundbreaking strides, building a foundation of excellence in graduate training in cardiovascular epidemiology. These activities have positioned JSU as a leader in the field, setting an example, and serving as a model for other institutions to follow.

The JSU JHS GTEC investigators accepted the responsibility for leading JSU's efforts in cardiovascular disease research and training new biomedical and public health scientists through the JSU JHS GTEC network. This work enables the team to promote two very important mandates, one is national, and the other is local. On the national front, the National Institutes of Health and its *NIH strategic plan* emphasizes a commitment to research that improves minority health and reduces health disparities.[4] The NIH supports programs and activities like those developed by JSU JHS GTEC. The JHS GTEC is the first Graduate Training and Education Center ever affiliated with an NIH funded study, the JHS.

On the local front, the new JSU Elevate Strategic Plan[6] introduced by JSU's President Thomas Hudson outlines how JSU will meet the challenges and expectations and the university's prioritizations, in particular, Goal #3-*Research Excellence*. The GTEC team acknowledges, recognizes and welcomes the university's pledge to continue striving towards research excellence.

Results

This section enumerates the techniques developed and utilized by the JSU JHS GTEC to enrich the educational experiences and skills of graduate students, increasing their interest in entering careers in biomedical sciences to alleviate the shortage of trained professionals in cardiovascular epidemiology. The JSU JHS GTEC recruits and trains graduate students who ordinarily do not have access to such opportunities. In 2013, the JSU JHS GTEC became the first Graduate Training and Education Center affiliated with a major NIH study¹. The JSU JHS GTEC created the Daniel Hale Williams Scholar (DHWS) program to provide avenues for scholars to interact with public health and biomedical scientists to learn to identify, predict, and prevent cardiovascular disease by exploring the JHS data, while they complete their academic degrees at their home institution. Since its inception, the JSU JHS GTEC has grown into a state-wide collaboration that includes the University of Southern Mississippi, University of Mississippi Medical Center, JSU's colleges, and the other post-graduate programs at the Mississippi HBCUs, Mississippi Valley State University and Alcorn State University.

The activities of GTEC are focused on cardiovascular epidemiology and related biomedical research, targeting under-represented minority post-graduate students and leveraging the resources and research opportunities of the JHS. To successfully reach the lofty goals advanced by the leadership, GTEC developed a Learning Community (LC) environment where graduate students are exposed to academic training and expert mentoring to prepare them for a future in CVD research. The LC comprises Learning Community Advisors, who are comprised of nationally-renowned mentors, JSU Public Health instructors, and GTEC investigators.

The DHWS program includes: (1) an enrichment curriculum; (2) quarterly seminars; and (3) a Summer Institute at the University of Michigan. Students attend enrichment activities comprising: (1) Applied Biostatistics; (2) Cardiovascular Disease Epidemiology; (3) Social Epidemiology; (4) other Emerging Topics; and (5) Research Writing. The training focuses on developing proficiency in cardiovascular health knowledge.

Conclusion

JSU is positioned to address the shortage of underrepresented minorities and the growing demand for a diverse public health workforce because JSU has the historical commitment to address these concerns. The JSU JHS GTEC provides a value-added opportunity by its practice of coordinating existing efforts of training and education with partnering institutions and further developing the human capacity to promote cardiovascular disease research, while training underrepresented minorities to meet the needs for biomedical research to eliminate

cardiovascular health disparities. The DHWSP, operated by the JSU JHS GTEC, will continue its dedication to reducing inequities in the science field which is a major step towards reducing disparities in the scientific workforce. With continuing support from our institutional leaders and our funders, JSU GTEC can continue to develop enhanced mentoring and curriculum structures for the DHWSP, and can maintain efforts to inspire productive career investigators. JSU JHS GTEC is poised to increase the diversity of America's public health, health professional, and biomedical research workforce.

References

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