Christopher Cross and the W. Montague Cobb Research Laboratory – Informational Text

**Background**

As a child growing up in central Ohio, I did not have much exposure to science. Like most black children in my community, the educational options we had were limited and science fell low on the list of priorities. Yet I still became interested in science, albeit through an unlikely source: comic books. Since that time, my passion for research and science has skyrocketed. I have been trained at the Georgia Institute of Technology, Harvard University, the National Institutes of Health (NIH), and Howard University, where I am currently in pursuit of a Ph.D. in Anatomy that aims to investigate mental health disparities in African Americans using skeletal anatomy and skeletal DNA coupled with in silico approaches.

**Experience**

In the relatively short time I have been advancing my knowledge of science, I have realized a lifelong goal and commitment to making the path of scientific understanding more accessible for all students, but with a particular sensitivity to the unique difficulties that minority students face in the sciences. This cerebral event facilitated my interest to seek exposure to science and education policy. In this vein, I completed a neuro-policy internship at the Potomac Institute for Policy Studies, and successively was a congressional science fellow in the office of the Honorable Frederica S. Wilson to the United States House of Representatives Committee on Science, Space, and Technology.

**Career goals**

Taken together, these experiences have clarified my ultimate career goal, which is to become a Research Professor who informs and helps influence science policy. I want to educate, conduct translational neuroscience research, and promote and mentor multicultural diversity in science. My immediate goals include completing my doctorate in less than two years. I plan to take that research and knowledge into an assistant professor or research scientist position.
Current project

My doctoral research aims to investigate mental health phenotypes and their underlying genetics in African Americans using an in silico approach. Among American populations, African Americans represent one of the most marginalized in terms of their health-seeking behavior and access to mental health care. This has led to a deficit in studies that have characterized African American mental health phenotypes and their underlying genomics. We propose to use both in silico and molecular genomics approaches to address the extent and amount of functional genetic variation that is contributing to mental health phenotypes in a subset of individuals from the W. Montague Cobb Human Skeletal Collection.

I am currently the Assistant Curator of the Cobb Collection, which is named after the first African American biological anthropologist and renowned Chair of Howard University’s Anatomy Department. It is a hand-curated sample of de-fleshed human cadavers that were donated for scientific purposes from 1932-1969. This collection is uniquely positioned to help address large-scale skeletal biological research on African Americans from the late 19th to mid 20th Century. Therefore my research will provide unique historical insights into the prevalence of specific neurogenetic anomalies in African Americans.

Our expected findings include results that will more accurately reflect the true status of neurogenetic disorders that could directly translate to the clinic by providing clinicians with sound scientific evidence for the detection of neurological disorders in underserved populations. In addition, our approach will contribute to the current understandings on the range of genomic variation for neurodevelopmental and neuropsychiatric disorders. The long-term goal is to develop interdisciplinary algorithms for detecting variants contributing to mental health disease in an anatomically well-characterized human skeletal collection. In addition, we endeavor to create novel approaches to understanding the longitudinal implications of neurogenomics on all human populations.