Christopher Cross and the W. Montague Cobb Research Laboratory – Q & A

In five sentences or less, can you explain what you are doing?

As the Assistant Curator, I help organize the human skeletal remains in association with their clinical records. Similar to a curator in a museum who oversees the collection to maintain records and integrity of their housed materials.

As a doctoral student, I am investigating mental health diseases that have a strong genetic basis, i.e. bipolar disorder and schizophrenia. More specifically, I’m looking at the prevalence of these conditions from the DNA of 70 to 80-year-old African American skeletons. This is important because neuropsychiatric and neurodevelopmental disorders are being under-diagnosed in African American and other minority populations due to minimal scientific studies. My project will help give more information to psychiatrists and physicians to better diagnose and treat people of color in the near future.

Why are you studying skeletons?

I am trained as an anatomist and therefore a subject matter expert of sorts when it comes to the human body and its skeleton. This training I received in the department of Anatomy at Howard University in the College of Medicine sparked my interest in forensic medicine and anatomy. Aside from being interested, it is also very applicable to look at African American skeletons for my project; otherwise, it is very difficult to get the numbers of individuals needed to prove or disprove my hypothesis or theory.

What’s your hypothesis? How did you come up with it?

We hypothesize that the results will yield unequivocal genetic and epigenetic insights to the prevalence of mental health disease for African Americans during the early-to-mid-20th century.

This idea was developed after much background research and discussion with my academic and research advisors. It was a collaborative team effort.

How long is this research experiment going to take you?

It will take about two years.

Why should anyone care about their DNA/genes? If you are born that way, aren’t you stuck with whatever you’ve got anyway?

This is a great question because there is no right or wrong answer – it is person-specific. I personally think it’s great to know as much as you can about a problem that is likely to occur in an effort to minimize or prepare yourself or loved ones for the aftermath. For example, if my DNA was sequenced and I found out I’m at high risk for heart disease, I could change my diet and exercise more to decrease its effects and hopefully live longer. However, others may not want to know because they want to live
their life without fear or worry of future implications, especially if the genetic diagnosis is more severe, i.e. breast cancer or Alzheimer’s disease.

**What was Harvard like?**

Harvard is located in Boston, MA, and I had only been there one time before for the National Society of Black Engineers’ conference, but this time was different because I was there for about three months working in a lab. I had excellent training from a postdoc to learn small animal surgery to transplant islet cells (insulin-producing cells) from a non-diabetic mouse to a diabetic host to aid in restoring blood glucose levels. I recommend you going to experience it for yourself. I found it to be quite interesting and a rich place to learn a lot of amazing things.

**Why is teaching and education so important to you? Does everyone feel this way?**

My personal experience and philosophy is that enlightenment may be achieved through the pursuit of education. I believe through the process of becoming educated, whether through reading, writing, or teaching, one may attain new insight and ways to look at old things, which is how we make progress with ourselves for the betterment of society and the world. I’m not sure if everyone feels this way, but I think most people know that education brings about change now; whether they think that’s a good change or bad change is a better question.

**What’s the best part about being at Howard University?**

Howard University is considered an HBCU (historically black college and university) however it is much more diverse than it sounds. At the advanced degree levels we have a law school, a business school, a medical school, a dental school, and a school of pharmacy and a school of divinity and that’s all in addition to our undergraduate and graduate schools. With that said, it’s such a cool place to interact with all these future leaders who are largely from a diverse minority background. I have learned so much about diversity and different ways to think about problems that unlike any other place I feel more confident and prepared to become whatever and whoever I want.

**Oh! And did you have a comic book series that was your favorite and why?**

Yes, my favorite comic was X-Men. I just thought it was the most amazing show to have mutant powers brought on by science to fight the bad guys and still look good while doing it.