Q&A with Clintoria Richards-Williams,
2007 K-12 Minority Outreach Fellow

Who are you?
Clintoria Richards-Williams

Where were you born?
Montgomery, AL

What childhood experiences led to your interest in science?

As long as I can remember, I have always had an interest in science. One of my earliest childhood memories consists of me providing comprehensive medical examinations to my stuffed animals. My goal was to give my inanimate patients accurate diagnoses based on my thorough observations.

Why did you decide to study science?

Science has always been one of my favorite subjects. It gives me the satisfaction of understanding the underlying mechanisms of life's many phenomenons. However, it was not until high school that I made the decision to major in biological sciences in college.

Where did you attend school/university?

Clark Atlanta University, Atlanta GA
The University of Alabama at Birmingham, Birmingham AL

How did you decide on the school?

Clark Atlanta University is a Historical Black College and University. This small liberal arts and science school has a reputation of producing highly capable individuals. This important feature combined with the intimate educational experience that I desired were the key determining factors in my decision to attend this institution as an undergraduate. After deciding on a career in biomedical sciences, I made the decision to continue my scientific training at the University of Alabama at Birmingham. I was intrigued by the cutting edge research that was occurring at this institution.

How did you become interested in physiology specifically?

An Anatomy and Physiology class sparked my interest in physiology. This engaging and interactive course allowed me to translate basic science concepts into physiological applications.

What is your current position?

Presently, I am a doctoral candidate at the University of Alabama at Birmingham in the Department of Physiology & Biophysics.

How did you decide on your current career path?

The universal advice that is given to anyone considering a career path is to select an area one enjoys and can envision doing for the rest of his or her life. With this suggestion in mind and after careful consideration, I decided to choose a career in biomedical sciences.

How did you get there?

What do you do within that position?

Describe your work in lay terms

My research focuses on examining how ATP and zinc control insulin secretion from β-cells of the pancreas. These molecules are present with insulin inside of storage vesicles. Furthermore, after a meal, when blood glucose increases, all three molecules are released from β-cells. Insulin travels through the bloodstream to fat cells, liver cells and muscle cells where it signals for these cells to pick up glucose from the blood. On the other hand, ATP and zinc remain close to β-cells. We hypothesize that local ATP and zinc signal to β-cells whether or not to continue releasing insulin. In some cases of diabetes, patients do not produce ATP properly and/or have low zinc levels. Therefore, understanding how ATP and zinc regulate insulin secretion is important to understanding how diabetes may progress.

What are your outside interests?

What do you do for fun?

I love to laugh. Therefore, I participate in activities that are centered around this essential stress reliever such as watching comedic sitcoms or movies and spending time with my family.

Volunteer work?

I serve as a mentor in a local outreach program for minority students who display an interest in a science career.

What advice would you give?

My universal advice speaks to any individual regardless of career stage. I encourage the development of a mentoring team that consists of persons who are qualified to provide valuable guidance regarding specific career areas.