



**Q&A with Mesia M. Steed,
2006 K-12 Minority Outreach Fellow**

Interview Date: April 2006

Who are you?

Mesia Moore Steed

Where were you born?

Henderson, Kentucky

Daughter of Rev. Frankie Moore & Carnie S. Moore

What childhood experiences led to your interest in science?

Having majority of family health professionals lead me to consider health but on the preventative side. I can remember have scientific books on our book shelves including anatomy, physiology and pharmacology. I always had questions however knew practicing medicine was not my passion. My interest in science was further developed after speaking with a local physician at a career fair.

Why did you decide to study science?

*Science is a mystery to me. For every major discovery there are 100s more yet to be found. Studying physiology unlocked the mystery of the body to me. The question **Why?** consumed me and sparked a greater desire to learn and understand.*

Where did you attend school/university?

University of Louisville, Louisville, Kentucky

How did you decide on the school?

I was awarded an academic scholarship: Woodford R. Porter Trustee Scholarship

How did you become interested in physiology specifically?

While employed by the NorthWest Area Health Education Center (NW AHEC), I worked very closely with different health organizations in particular, the American Heart Association. I had the opportunity work on a minority health initiative with Dr. Irving Joshua, chair of the Department of Physiology and Biophysics at the University of Louisville. After hearing my background he encouraged me to visit his department, that led to me taking two Physiology course and a year later I was in the PhD program. I was hooked!

What is your current position?

*Graduate Student, PhD Candidate**

**As of April 2006*

How did you decide on your current career path?

I have not yet chosen a career path but am leaning toward academic research. My experience has been good and I want to continue researching and training/mentoring students.

How did you get there?

I was at the right place at the right time with a strong desire to learn and an open heart and mind.

What do you do within that position?

N/A

Describe your work in lay terms.

The focus of my research is the toxic sulfur containing amino acid, homocysteine. It has been referred to as the cholesterol of the 21st century. Homocysteine has been implicated in the development and progression of heart disease, hypertension and atherosclerosis. My work concentrates on how homocysteine affects nitric oxide production and bioavailability in the development of disease.

What are your outside interests?

My major outside interest is women's health. I spend a great deal of time speaking at various church and community events empowering women to take personal interest in their health with a focus on exercise. I hope one day to write books and speak on the subject of empowerment and women's health.

What do you do for fun?

I am an action movie buff and watch my favorite TV shows: CSI, 24 and Law & Order. I read and exercise. Also relax with friends and a good meal after a long day in the lab.

Volunteer work?

I do a lot of volunteer work independently, with my family and with my sorority, Zeta Phi Beta Sorority, Inc. Over the years, I have developed great professional, working and personal relationships with my local American Heart Association, American Cancer Society, Kentucky Cancer Program, March of Dimes, Black Achievers and Jefferson County Public Schools to name a few.

What Advice would you give?

- **a pre-college student considering a career in physiology?**
 - *Physiology is Science. Science is Research. Research is Discovery. Discovery is Practice. Therefore you must practice and study to discover how research unlocks the scientific mysteries of physiology. It is an exciting challenge, join me!*

- **an undergraduate student considering a career in physiology?**
 - *Physiology gave birth to many areas of scientific study including biochemistry, biophysics and pharmacology. To be diverse and competitive, take interest in building a solid repertoire of scientific knowledge in addition to physiology. Then find a way to apply that knowledge to your long term physiological interests.*
- **a graduate student in physiology?**
 - *As a graduate student you are discovering your strengths and weaknesses. Put effort into minimizing your weaknesses and maximizing your strengths. Find great honest mentorship to help direct you in completing your degree, finding a career path and developing as a professional.*
- **a postdoctoral fellow?**
 - *This is your time to develop your interest. Think big, work hard, connect the dots and believe in you.*
- **a new investigator?**
 - *Be active in APS to be an accessible good role model and coach for young scientists.*

Please list any recent publications you have had published in APS journals.

Mechanisms of Homocysteine-Induced Oxidative Stress

Tyagi N, Collins K, **Steed MM**, Ovechkin AV, Moshal KS, Tyagi SC
Am J Physiol Heart Circ Physiol. 2005 Aug 5

Regulation of Homocysteine-Induced MMP-9 by Extracellular Regulated Protein Kinase-1/2 (ERK-1/2 Pathway.

Moshal KS, Sen U, Tyagi N, Henderson B, **Steed M**, Ovechkin AV, Tyagi SC
Am J Physiol Cell Physiol. 2006 Mar;290(3):C88