

Jennifer Njoroge
Student Gallery
CVD Training and KST Web sites

- **Background**

My background is in chemical engineering, and I became very interested in medical research in the last two years of my undergrad. As an engineering student, I worked on projects in computational modeling and laboratory research. I did several internships at oil companies and a pharmaceutical company. I eventually came to realize that I wanted to pursue a PhD in an area of health research that directly involves working with and helping the public. I chose Pitt because of its reputation for strong medical research and because of its location. I knew that cardiovascular disease research was one of my interests, but I had many other potential interests as well. I wanted to attend a public health school with strong research in a variety of areas. I grew to like Pittsburgh as an undergraduate student at Carnegie Mellon University, and Pittsburgh is close to many of my family and friends. So, GSPH's combined strengths of great research and great location provided the draw for me to come.

- **Areas of Interest and dissertation work**

My main interest is platelet function and subclinical cardiovascular disease. My dissertation will focus on the associations between in vivo platelet hyperactivity and 1) subclinical cardiovascular disease (intima-media thickness, pulse wave velocity) 2) functional single nucleotide polymorphisms (SNPs) in platelet receptor genes 3) dietary sodium levels 4) metabolic syndrome/insulin resistance. My measure of in vivo platelet hyperactivity will be plasma β -thromboglobulin. β -thromboglobulin is a platelet alpha-granule protein released only when a platelet is activated. Platelets play an important role in the initiation and progression of atherosclerosis. Thus, it will be important to see if increased in vivo platelet activation is associated with subclinical CVD measures and factors related to CVD. I will be using data from participants in the SAVE study. SAVE is a randomized clinical trial in which 349 overweight or obese participants, age 20-45, are receiving a dietary and activity intervention with a goal of achieving a 10% weight loss and an increase in weekly activity level of 150-200 minutes. Participants were randomized to either a low sodium or a control sodium intake. The effect of the intervention on the cardiovascular system is being evaluated through the measurement of pulse wave velocity (PWV), endothelial function, and common carotid wall thickness and diameter. In addition to my platelet work, I am also investigating the associations between sleep and metabolic syndrome/insulin resistance in this group.

- **Remote training experience:**

- I was able to travel to the University of Vermont Medical School for several days, where I learned laboratory techniques that are important when working with platelets. I spent time in the lab of Dr. Chris Holmes, and was able to discuss my research ideas with Dr. Russell Tracy and Dr. Mary Cushman.

- **Perspectives on the program**

I enjoy the monthly subclinical cardiovascular disease journal club meetings. I also enjoy the spirit of collaboration between postdocs, predocs, and faculty members here. I appreciate the effective mentoring of the more advanced students and faculty members in the program.

- **Advice to current and prospective students:**

If you are enthusiastic about doing research and want to work with others who are enthusiastic about research, teaching, and mentoring, this program is a good fit. There are so many opportunities here at Pitt GSPH and Medical School, that I believe the possibilities for collaboration are endless. You should glean all the knowledge you can from the epidemiology and biostatistics coursework in the first 1-2 years. With this knowledge, self motivation, and a desire to collaborate with others, the possibilities are endless.

- **Future Plans and opportunities:**

I am not yet sure what I will do after graduation, but I plan to continue in research, most likely in an academic setting. I hope to be involved in molecular and computational epidemiology research after obtaining my PhD. I also enjoy teaching, so I may pursue a position as an Assistant Professor.