

Harisa Spahic

Graduation Year: Junior

College: Science

Major(s): Biochemistry

Minors(s): Anthropology

Scholar Group Membership: Sorin Scholars

Did you received other funding for this project?: No

Could you have completed this project without CUSE funding? No

More details on CUSE funding assistance? Without CUSE funding, I would not have the opportunity to devote the majority of my summertime to research, but rather spending most of my time at a part time job or two to support myself for the summer and upcoming school year.

Project Title: Continuation of a pilot investigation of the relationship between neurocognitive function, inflammatory biomarkers, and CYP2D6 in breast cancer patients undergoing chemotherapy and endocrine therapy.

Project Location: University of Notre Dame

ND Faculty Mentor: Pascal Jean-Pierre

Project Type: Research, Research Assistantship, Eagan Fellowship

Why did you undertake this project/experience? Deepen your knowledge of a topic or issue, Prepare for graduate school (MA or PhD), Prepare for professional school (MD, MBA, JD), Prepare for national fellowships, Career discernment and/or preparation

Did your funded experience help you:

[Deepen your understanding of your coursework or field of study]: Very Much

[Discern your interests and post-bac goals]: Very Much

[Become confident in your ability to set and achieve your goals]: Very Much

[Gain a more nuanced view of local, national, or global communities]: Very Much

[Improve your written and verbal communications skills]:Very Much

Tell us about your experience.

A significant portion of my time in lab was spent interacting with both cancer patients and healthy control participants. This was the core data collection aspect of my research where we collected data via blood, brain imaging, questionnaires, and cognitive testing. A majority of time was spent analyzing the collected data from summer 2015 and this summer in preparation for presentation, publication, and future research endeavours. Our primary goal of the research is to understand any potential links between SNPs in the gene CYP2D6 and cognitive ability in cancer patients before and after treatment. We have been able to work toward understanding this connection or lack of it and comparing this relationship to additional factors such as brain imaging, pain, fatigue, etc. This research has extended over two summers and two school years therefore teaching me how long research can take; however, once we started analyzing the data and understanding our preliminary results, the length of time was well worth it. The data

collection was also a valuable experience as I came to understand how participants feel as a participant in a clinical study and what his or her motivation is in participating.

Describe the impact this project had, both on you as a student-scholar and on the people you worked with.

This project has had a profound impact on me as a student-scholar because it has reinforced my desire to become a research in the medical field. Following over a year of data collection, I was discouraged at the lack of analysis we had been able to conduct due to the need for further collection, but this summer completed that journey by allowing preliminary analysis to begin which has been a tremendous learning experience in the form of learning how to use specific softwares and understanding the multiple statistical processes used in order to draw meaningful conclusions. I was able to train and work with newer lab members over the course of the summer which exposed to me areas in the lab I did not understand as well as I thought I had therefore giving me the opportunity to improve my skills in certain areas. The collaborating work of the three undergraduate researchers in the lab over the summer was an exciting experience for all of us as we learned numerous skills invaluable to a future clinical researchers. The study participants we worked with typically expressed gratitude for our work in helping understand cancer-related neurocognitive dysfunction as they express the hardships of fighting cancer and how they must continue to live life following beating the disease. It was also this continued reminder while working with patients that motivated me to stay passionate about this type of research because it has the potential to affect many lives.

Describe how this experience is connected to your plans as a student or future professional.

I hope to pursue an MD/PhD following graduation then hopefully focus my career on conducting clinical research. While I do not know what my area of research will be in the future, working on cancer-related neurocognitive dysfunction and biomarkers has been an adventure that has taught me innumerable skills (brain imaging data collection and analysis, blood analysis, presentation practice, writing for publication, etc) that can be used in various other disciplines. My experience over the past two summers has illuminated what my future may entail, and it has motivated me to continue down this path.

What advice would you give other students who are planning to pursue similar projects?

Do not be afraid or immediately quit if you become discouraged or do not see your research producing immediate results. Research is a long process that may be long; however, when you reach the end, or even the middle where some results can begin to emerge, you realize everything you had done beforehand was worth it.

I acknowledge that this form has been filled out truthfully and to the best of my ability. I understand that this information will be shared with many different CUSE constituencies. As such, I have provided as much useful information as I was able. I understand that CUSE will not complete my award disbursement until this form is successfully completed. If I have any

