SAMPLE ABSTRACTS

Many more examples in the abstract books from previous Discover USC events at www.sc.edu/our/pastdiscovery.shtml

Community Service
A local town has decided to replace the community’s water supply. This decision was driven by problems related to the quality and quantity of the current water supply. As a class we were asked to research and develop three proposals about what to do with the old reservoir – taking into account voices and thoughts from community members. Additional information from engineers and scientists about the nature of the dam’s structural problems and the cost of repair would also be incorporated into our final recommendations. Through various methods of research and interviews (community round tables, public meetings, and interviews with community members, engineers, and scientists) we constructed three different proposals that included research on the economic, environmental, and community impact. Our final recommendations included: complete repair of the dam, creation of a lakeside park, and drainage of the reservoir and construction of a shopping mall. We learned a great deal about the complexities and importance of working together (different perspectives and skills) in conjunction with the community members to create something that was useful to the community. This project had a significant impact on the way each of us in the class view what it means to be an active participant in our own communities. The impact this project had on our class was invaluable – hands on experience while finding solutions to a real community problem.

Diversity and Social Advocacy
How do you create change in an environment that is traditionally resistant to change? As a transgender individual, I am intimately aware of the systematic challenges transgender people face in regards to inequitable health care, widespread discrimination, rising homelessness, and severe violence. At USC, I co-founded the Trans Student Alliance in an effort to create a safe space for transgender students and allies to discuss concerns and goals. Implementing more inclusive policies at our university to address the needs of transgender students is extremely important – yet frequently invisible. To increase visibility and promote dialogue, I have served as the co-writer of the summer 2015 Garnet&Black feature “TransCarolina,” as a Diversity Peer Educator, and as a panelist at local and national conferences. I would like to empower others by sharing my resources and experience – because change happens together.

Global Learning
During spring semester, I studied abroad on exchange at the Otto-Friedrich-University in Bamberg, Germany. I had studied German for five years in high school and two years in college, and I wanted to study in Germany in order to achieve the academic, professional and personal goals I had set for myself. I was a German major and wanted to achieve fluency in my language skills. Bamberg also offers a wider variety of classes on German topics than any American university could, and these classes would supplement my coursework at USC. As a future German teacher, I wanted to get to know the country and its culture better by travelling as much as possible, in order to enhance my future lessons with cultural knowledge and first-hand experiences. The experience was personally significant because, at the age of 20, I had never left the country and knew that I could not grow without distancing myself from all that was familiar to me. The five months I spent there were a period of growth, exploration, and understanding. My German has improved significantly and I am able to function at a much more advanced linguistic level than before my experience. I met many Germans and travelled to every region of Germany, visiting large cities and small towns, and I feel competent in my ability to convey knowledge of the culture to future students. I also feel that I know myself much better than before the experience: my limits but also my capabilities.

National Fellowships
As an Anthropology major with plans to become a doctor treating Hispanic patients, I applied for a Rotary Academic-Year Ambassadorial Scholarship to the Universidad de Guadalajara. The goals of Rotary International are ones that are congruent with my own professional aspirations, and their international service projects appeal to my interest in public health. Because the scholarship is ambassadorial in nature, the experience will increase my adaptability, ability to establish rapport, and overall confidence working with people, translatable to my career in medicine. The scholarship would enable me to spend a year studying Spanish to work toward fluency. Using the Office of Fellowships and Scholar
Programs, and later, my sponsoring Rotary Club (Forest Acres), I was able to submit a completed application and interviewed for the scholarship at the district level. In order to submit the application, several reviews and revisions of my essays were completed, as well as preparation for the August interview. The process of applying for the Rotary helped me learn more about my proposed country of study, but it also helped refine my perspectives and views of my own career plans. I was able to sharpen both my oral and written communication skills, and my mock interview prepared me for the district interview.

**Professional and Civic Engagement**

**INTERNSHIP**

During the summer, I worked with the United States Department of State in the Bureau of International Information Programs (IIP). The IIP uses a multimedia approach to engage international audiences on important foreign policy issues and explain the core values that underlie U.S. policies. IIP communicates with foreign opinion makers and web-savvy audiences through a wide range of print and electronic outreach materials published in English, Arabic, Chinese, French, Persian, Russian and Spanish. As a journalism major at the University of South Carolina, my internship provided me with first-hand experience in online journalism. I had the opportunity to research topics, interview notable figures, and generate and publish materials for the www.America.gov web site. The site covers a broad array of topics including economics, security issues, democracy, human rights, U.S. politics, arts, sports, global health, space exploration and the environment. Specifically, I wrote several short articles about the 2008 Summer Olympics in Beijing, China. I also had the opportunity to attend the Democratic Convention in Denver and write a blog about my experience. Participating in this internship reaffirmed my decision to pursue journalism as a career and expanded my computer skills. Through this experience I hope to pursue an internship with a foreign newspaper next summer.

**STUDENT ORGANIZATION**

Greek organizations play a major part in promoting academic success, cultivating personal growth, developing lasting friendships, pursuing philanthropic causes and fostering leadership. My most significant contribution to the University of South Carolina has been my commitment to improving the Greek life experience at the University. Becoming a member of Lambda Chi Alpha fraternity has greatly enhanced my college experience by allowing me to strive for academic excellence, grow socially and develop my leadership skills. These were all unexpected benefits. Through the experience of serving as president and leading the efforts to successfully rebuild our chapter, I learned to think critically to solve complex problems, interact with a diverse group of people, and communicate effectively. My presentation will discuss the insights I gained about my leadership abilities as well as the positive impact Greek life has had on my college experience and shaping me as an individual.

**Research/Scholarly Activities**

**HUMANITIES**

The pattern of social shifts and psychological stresses that make up modernity drew from early 20th-century writers the formal responses we know as Modernism. As these literary experiments indicate, modernity itself demanded new modes of perception and representation, and thus perhaps not surprisingly, esotericism often played a central role in Modernist works. Esotericism was especially important to the writings of those Modernist women writers who were exploring outlets for gender and spirituality that orthodox religion rejected. For my senior thesis, I am researching the place of esotericism in the works of the imagist expatriate poet H.D. (Hilda Doolittle), the newly “rediscovered” novelist Mary Butts and the popular writer and occult leader Dion Fortune (Violet Firth). By studying the archives of Mary Butts and H.D. at the Beinecke library, and Dion Fortune’s little known The Magical Battle of Britain along with these writers' better known works, I have gained a more thorough understanding of esotericism's role within these writers' works and have created a foundation for further research at the graduate level. My research reveals that these writers used existing symbol systems to create imaginary structures attuned to the female psyche. Furthermore, the wars were a central catalyst to these writers' creations, affirming the impact of the wars on the female imagination.
SOCIAL SCIENCE

Post-Traumatic Stress Disorder (PTSD) affects nearly 1.5 million female survivors of sexual trauma in the United States. Resulting from the psychobiological changes many women undergo after experiencing a sexual assault, PTSD is often characterized by dissociation, chronic muscle tension due to high levels of generalized and trauma-related anxiety and negative body image precipitating harmful health behaviors and poor health outcomes. The purpose of this study is to review current literature to determine the potential benefits of incorporating a structured Pilates-style exercise program within traditional therapies for PTSD. During the first phase, we examine the emotional, cognitive and physical symptoms of patients with post-traumatic stress disorder due to sexual assault and abuse. The second phase reviews current treatment models – traditional and alternative – to determine their efficacy in treating the wide-range of somatic PTSD symptoms. Finally, the study compares the therapeutic needs of PTSD patients with the espoused benefits of Pilates to determine the potential efficacy of incorporating a structured Pilates program into current treatment models. Due to its focus on mind-body awareness and stress reduction, Pilates appears to complement current treatment models for post-traumatic stress disorder, while also providing an additional method for managing the physical symptoms of PTSD. A preliminary review of the current literature suggests that adding Pilates as an adjunct treatment may help patients achieve desired states of relaxation, attune to internal sensations, and improve body image and overall physical health.

SCIENCE/ENGINEERING

Cerebral amyloid angiopathy (CAA), a cerebrovascular deposition of the amyloid-β (Aβ) protein, is a well-known cause of hemorrhagic stroke. Altered Aβ transport may be responsible for vascular Aβ accumulation. However, it remains unclear how the transport of Aβ from the brain to the vasculature is impeded, facilitating Aβ accumulation. If the transport of Aβ monomer is reduced, an accumulation of soluble protein could occur, but more importantly, reduction in the transport of soluble aggregates could leave behind seeds that would dramatically accelerate amyloid formation that leads to deposition. P-glycoprotein (Pgp), an ATPase transporter, interacts with amphipathic molecules and regulates their removal from the brain. It was hypothesized that Pgp is involved in the transport of Aβ soluble aggregates through the BBB. Aβ assembly state(s) transported from the basolateral to the apical side of confluent monolayers of human brain microvascular endothelial cells were compared using endothelial permeability coefficients (Pe). Both Aβ monomer and Aβ aggregates were transported across monolayers. In addition, Aβ assembly state(s) that interact with Pgp were identified using an in vitro assay that measures ATPase activity of Pgp. These results revealed that Pgp preferentially binds soluble Aβ aggregates, but not monomer of fibril. Together, these findings suggest a role for Pgp in transporting soluble Aβ aggregates across the BBB.