

Arts

Arts Poster Presentations

Name: Nicole Cassano

Title: proud to be an ameriCAN

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: When faced with the task of creating a stamp that would reinforce the idea of “Made in America,” I found myself overwhelmed. After all, it is an extremely broad topic. I immediately started to research anything and everything that I considered to be even remotely related to America. While engulfed in my research, I stumbled upon Andy Warhol and his infamous paintings of Campbell’s soup cans. I was immediately inspired. For me, the Campbell’s soup can stands for so many things. The colors of red and white are reminiscent of America, and the American flag. The product itself originated in America, and of course is mass-produced. The Campbell’s soup can is, to say the least, iconic. My stamp is a culmination of each of those concepts – pride in America; in American-made products; in Americans themselves.

Name: Jennifer Dahl

Title: Uniform of America

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: Currently in the United States, there has been a growing difference between the consumption of American made and manufactured products and American pride. But now, more than ever, there is a kind of urgency to close that gap as the consumption of imported goods has cost our people millions of jobs. We need to match that level of pride with support. Through using a postage stamp, a tiny poster that reaches the masses of this country, I intend to restart that urge to buy from home. Using the subject matter of iconic American symbols such as denim jeans paired with white t-shirts and the original sneaker, I will appeal to all ages. Yet by focusing on an advertising angle, I intend to reach the younger generations of America to try and secure this idea for the future.

Name: Ikerson Hopper

Title: From the Ground Up

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: The project assigned to me was to create a postage stamp that promotes products made in America today. My solution to this assignment was to use iconic image of the United States of America flag rising in Iwo Jima to represent Americans coming together in support in bringing back American made products. The red, white and blue New Balance® shoe represent both the flag in the original photo as well as the products being made in America giving a building from the ground (Shoe) up. Like me, there are many others who descend from different cultures, but ultimately make up the society of the United States.

Name: Katelyn Imbesi

Title: American Made

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: Post World War 2 America was a period of economic prosperity in our country. For my stamp I wanted to promote manufacturing in America by looking into our history and the successes our ancestors had in creating jobs and boosting economic prosperity. I began my research by looking at old photographs of my grandparents and chose to use an image of my grandfather standing beside an American made car. I also included an image I took of myself sewing an American flag. These photographs provide a look into the past and promote American pride as well as inspire domestic manufacturing.

Name: Alisha Kelleher

Title: Home-Grown Pride

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: At a time when 'Made in China' has become something of a standard, and 'US Made' is an ever-increasing rarity, suggesting a switch from foreign to locally sourced goods seems like a bit of a stretch. However, now more than ever we as a nation need to take pride in our ability to make, to create, and to support ourselves. In buying US-made, we support the creation and the maintaining of jobs within our own county, jobs that we need to flourish and grow. My project focuses on the 'US Made', and through collaging a large variety of unique tags, I seek to show the sheer variety as well as quantity of goods that we as a country already produce. In that way, I can make it clear that it is possible for us make that change and grow our presence as a country that produces, so that one day the standard can be 'Made in the US'.

Name: J.T. Kirby

Title: Jeep in America

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: I wanted to find a product that was unmistakably American in order to solve my postage stamp project. What came to mind was the Jeep Wrangler. This car has been in production since World War II and has always been made in America. The car has a very recognizable shape and look that is mostly unchanged since the inception of the vehicle in the late 1930's. I intend to depict the car in a setting that is truly American and depicts being made in America and shows patriotism.

Name: Heather Leonhardt

Title: Home-Made in America

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: American jobs are rapidly decreasing because of the lack of American made and bought products. While researching, I found that 180 companies in more than 40 states have joined together to support the "We Build America" initiative, started by Marnie Oursler. She built her house in Bethany Beach, Delaware out of mainly American made materials. If construction companies would increase the American made materials that they use by just 5 percent, approximately 220,000 jobs would be created. I will visually communicate this by using original photography of a door, replicating Mrs. Oursler's. The door will be opening to show that using American products will open the door to many jobs for our citizens.

Name: Tiffany Lopez

Title: Art Restoration in Cuba: The National Art Schools

Faculty Advisor: Ms. Pamela Koehler, adjunct professor of art and art history

Abstract: The goal of the National Art Schools in Havana, Cuba was to bring cultural literacy to Cuba following the revolution. However, the political uproar and the Cuban Missile Crisis of 1962 left Cuba in economic despair. By 1965, all work on the National Art Schools came to a halt. The National Art Schools are the best example of architecture from the early period of Cuban Revolution. These buildings embody the creative and cultural ideals that leaders sought to embrace during the 1960's. Therefore, it is essential that we preserve this site.

Name: Vincent Pane

Title: Technical Drawing in Archaeology and Physical Anthropology

Faculty Advisor: Dr. Anagnostis Agelarakis, chair and professor of anthropology

Abstract: Part of an innovative interdisciplinary endeavor (during a Fall 2012 special topics course titled: "Technical Drawing in Archaeology and Physical Anthropology"), this presentation reflects on aspects of artistic expression and understanding depicted from the view point of scientific drawing in the overlapping domains of archaeology, physical and forensic anthropology as well as medical illustration.

Student publication quality works represent methods and techniques taught and implemented as fundamental principles used in the in-scale illustration and graphic documentation of ecofactual, inorganic and organic artifactual materials, components of the cultural material assemblages recovered from archaeological sites that may range in chronological interval from Paleolithic to recent historic contextual association within human activity areas.

The enhancement of student skills and the offering of additional training and practice provides, in addition to the bolstering of creativity and inspiration through artistic understanding, much appreciated proficiency in the areas of applied anthropology particularly as it may relate to market employment opportunities and graduate school attainment.

This presentation is of interest to those in the domains of Biological and Social Sciences as well as the Arts.

Name: William Pasquarello

Title: Louisville Slugger: 'Home Made since 1884'

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: When I think about America the first thing that comes to mind is baseball. Since I was a little kid, I have loved the game of baseball. When I was presented with the project of "Made in America" the first thing that came to mind was baseball, and more specifically, the Louisville Slugger. Louisville Slugger's baseball bats have been made in Louisville, Kentucky since 1884. With such a long and great history of making American products, the image of the Louisville Slugger became the obvious centerpiece of my poster/stamp. Being the baseball enthusiast that I am, I went to my local sporting goods store and to purchase the perfect bat. Through the use of original photography of the iconic Louisville Slugger, the goal is to promote the idea of buying America's baseball bat and being proud to buy an American product that has stood the test of time.

Name: Gregory Quinlan

Title: Race and Culture in American Cinema

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: The practice of suppressing the social and or political context of verbal and expressive communication deemed objectionable, harmful, or sensitive to the general public, is a global phenomenon whose beginnings can be traced back to the origins of human civilization. *Cultural Origins and Practice of Censorship* is a historical analysis of the various definitions of obscenity and the practice of censorship, which has been adopted cross-culturally with slight modifications to suite the beliefs of the culture/generation authorizing the censorship. My research will examine the governmental call for censorship that immediately ensues with the establishment of new technological advancements, from the creation of the written word to the creation of the Internet. This study will review the influences and similarities of various civilizations/nations explanation of obscene material and their methods to censoring what they deem is indecent.

Name: Hannah Rohrs

Title: Stay Proud, Stay Loyal

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: When given the assignment of promoting production in the USA through the design of a postage stamp, I immediately knew I wanted to focus on clothing. How often do you look at the inside tag of a garment and see “Made in (insert any country other than America)”? Without being made in America, there is no guarantee that these products were created in a safe and fair environment. Through iconic and cultural tattoo imagery in our red, white, and blue colors, I hope to achieve a design that endorses the idea to both be proud of our country and loyal to her by supporting products produced in America.

Name: Nancy Samilow

Title: Glamorous USA

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: The assignment was to celebrate and promote why made in America matters. It is very important for the economy and builds more jobs. I started researching American companies, and the one that stuck out to me the most was Juicy Couture. Their slogan is “Born in the glamorous USA”. I decided to pair this brand with the iconic figures of the statue of liberty and the factory symbol of a sewing machine. Not a lot of clothing is made in our country and my solution for this project is focusing on buying products in America to better our country.

Name: Brittany Souke

Title: Don't Wear Cotton We Didn't Grow

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: The assignment was to create something that reinforces and promotes American production. I began this assignment by researching companies that not only began in America, but also continues to manufacture their products here. One company that caught my eye was American Apparel, not only because of the label but also the fact that a good portion of their merchandise is patriotic themed. Throughout my research process I also came across a song titled “Made in America” by country artist Toby Keith. I was inspired within the lyrics to entitle my project ‘Don’t wear cotton we didn’t grow.’ To endorse clothing companies that were founded and still manufacturing and producing in America today.

Name: Amanda Spiciarich

Title: Modern Day Rosie

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: Rosie the Riveter is one of the most iconic figures in American history. During World War II, Rosie was created to inspire women to take over the work force and boost worker morale. As thousands of men marched off to war, manufacturing jobs were desperately in need of workers. I feel that today we can relate to this aspect of our own history, as it is nearly impossible to find products that are made in America. Through my postage design I will fuse our past with our present by creating a modern day Rosie the Riveter to promote American made products via original photography and design.

Name: Jessica Way

Title: Red, White and Blue Jeans

Faculty Advisor: Ms. Dale Flashner, director of graphic design studio

Abstract: The assignment that was given to our class was to create a postage stamp that would encourage Americans to buy American-Made products in order to increase job opportunities as well as help support our economy. A thought that automatically came to me was the idea of blue jeans. Whenever you see a hard working American, you'll most likely see them in a pair of jeans. Levi Strauss created Levi Jeans for the working man, which are by far the most iconic jeans in the United States. They were manufactured with metal points of strain in order to create greater strength. My idea is to create the United States flag out of denim in order to represent how hard working Americans that had strength, diversity and durability helped create our country. It is my intention to take this flag to multiple environments in order to represent how different types of consumers buy American-Made products.

Name: Ariel Fleurimond

Title: Open [Art] Education

Faculty Advisor: Dr. Matthew Curinga, director and assistant professor of education

Abstract: This qualitative research analyzes the effects of the open education movement on traditional art education and pedagogical approaches. Art education has become a blossoming field of innovation rooted in successful practice and pedagogy. As society moves further into a digital age, art educators are facing the challenge of creating relevant lessons for students who are familiar and comfortable with technology driven interactions. Considering the versatility of modern students with regards to technology, a reasonable argument can be made that pedagogy and delivery of educational material will need to be updated in order to reflect modern teaching and learning. Based on learning theories, current open education research and the changing dynamics of digital native classrooms, the arts should undergo a technological upgrade in pedagogy that will both improve delivery of material and enrich classroom experience. In order to achieve that, the arts must willingly move away from what constitutes traditional art education, evaluate the available tools and move toward open art education. Existing programs and initiatives have proven that efforts in these fields are likely to result in successful implementations of open education resources in classroom settings. At the very least, there are several resources readily available to teachers who wish to participate in the open education movement.

Humanities

Humanities Oral Presentations

Name: Kristin Backert

Title: The Genderless King: Language, Power, and Gendered Discourse in 'Richard II'

Faculty Advisor: Dr. Louise Geddes, assistant professor of english

Abstract: Prior to his death, Shakespeare's King Richard II ironically remarks "Thus play I in one person many people" (V.v.31) as a means to articulate a sense of his own worthlessness. As Richard and Bolingbroke vie for positional stability, they utilize gendered discourse as a strategic performance to attain power to distort how their listeners interpret their speech. Linguistic supremacy, which is rooted in the characters' ability to study and adopt the language of the opposite gender, permits them to appear alternately powerful or subservient before the common people and nobles. Despite how both Richard and Bolingbroke implement gendered discourse, Richard cannot effectively assume either discourse because he envisions himself as a symbol as opposed to a man or woman, thus rendering his genderless. This paper uses Butler's theory of gendered language to assert that Richard's genderless status allows him to transcend a binary language system by creating a performative third discourse: that of a king.

Richard's belief that he has the divine right to rule leads to the expectation that he can excel in the linguistic realm because his kingly discourse will demonstrate his dominance over language and thus his capability as king. However, the transparent theatrical nature of this discourse prevents Richard from maintaining power because, as this paper further contends, it isolates him from his subjects who ultimately view him as incompetent to rule and from his audience who perceive him as manipulatory.

Name: David Campmier

Title: Dennis H. Mahan and William T Sherman: Teaching Civil War Strategy

Faculty Advisor: Dr. Martin Haas, associate professor of history

Abstract: Dennis Hart Mahan was the Professor of Civil and Military Engineering and the Science of War at the USMA from 1832-1871. He was responsible for educating cadets in the art and science of war, logistics, strategy, and tactics. General William T. Sherman, commander of Union forces in the Western theater from 1864-1865, acknowledges Mahan's impact on his strategic and tactical thinking and maintained correspondence with Mahan during and after the American Civil War. This paper argues that Sherman's development of tactics, strategy, and logistics, specifically total war, was deeply rooted in Professor Mahan's logistical, strategic and tactical thought by examining and comparing Mahan's field manuals, Outpost and Field Fortifications, presenting his teachings on the art and science of war, and then examining Sherman's Memoirs, specifically the chapter entitled "Military Lessons of the War" in order to detect the presence of Mahan's teaching in Sherman's actual wartime tactics, strategy, and logistics.

Name: Daniel DiGiuseppe

Title: At Your Own Risk: How Does Controversy Affect Social Studies Education?

Faculty Advisor: Dr. Diane Caracciolo, associate professor of education

Abstract: Research shows that controversy in social studies education can be highly beneficial to students, yet many educators fear controversy and its implications and consequences. For this qualitative case study I conducted semi-structured interviews with five social studies educators to determine how teachers themselves define the term 'controversy' and how its use affects the social studies classroom. The study also included an examination of institutional influences and definitions of controversy based on a content analysis of official educational documents, such as the N.Y.S. social studies standards and Common Core standards. In the course of the study the teachers' knowledge of their academic freedom emerged as an important consideration. The results of this study describe how controversy is embraced by all five teachers as essential parts of the social studies classroom, and that in fact, the study of history cannot be removed from the study of controversy. The evidence also suggests that controversy breeds certain invaluable life skills in students, skills that are not only important for students in the school setting, but as citizens in our democratic society as well. This study shows how social studies teachers should not fear controversy, but learn to accept and properly handle it to reap the full rewards controversy offers in the social studies classroom.

Name: Scott Gordon

Title: Revolution of the Dead: The New Zombie Apocalypse

Faculty Advisor: Mr. Terrence Ross, associate professor of communications

Abstract: The dead are coming for us. That much I am certain of. The last decade has seen a complete revival of the zombie genre. While they have long tormented us in film, the walking dead have now begun to infuriate new forms of media. The undead have ravaged the New York Times best seller list, overturned the video game industry, and are beginning to infect our cable networks. But why are the dead coming for us now, and more importantly, why do we want them to? How has the zombie genre transformed itself from a low-budget exploitative mess to a five-billion dollar industry? In my presentation, I will argue that the proliferation of the zombie is fueled by a desire for self-affirmation. Yet in their current manifestations, I suggest that newer zombie narratives have emerged with a radically reactionary tone that constructs itself against an earlier tradition of liberal, socially conscious zombie films best exemplified by the work of George Romero in the 1960s and 70s. Rather than suggesting and critiquing the inherent flaws in our current culture, these newer films side-step issues of social responsibility and instead appropriate zombie anger and violence as justifiable ammunition against a violent 'other' in ways that I show are antithetical to the zombie canon as constituted by Romero.

Name: Lara Hnizdo

Title: Yeats: Finding Immortality and Reconciliation through Cuala Press

Faculty Advisor: Dr. Louise Geddes, assistant professor of english

Abstract: Using research such as Delan Kiberd's book, *Inventing Ireland*, and Stephen Hart's essay, "Paradigms of Peripheral Modernity in Lorca and Yeats," my essay examines a few works by W.B. Yeats and attempts to connect them to Modernism by looking at the themes of the futility of the world, the longing for immortality, and the emerging dilemma Yeats faced with his country, his society, and his identity. Ultimately, what helps to bring a sense of stability to Yeats' tumultuous life is Cuala Press, the publisher established by Yeats' two sisters. It is through examining his loyalty to this press, and the very format in which his work was published, that Yeats' relationship to Modernism and his desire for lasting impact come to be understood.

Name: Patrice Kerlegrand

Title: The Moral and Ethical Implications Behind the Medical Experiments Performed by the Nazi Doctors of World War Two.

Faculty Advisor: Dr. Michael Christofferson, chair and associate professor of history

Abstract: This research involves analyzing the moral and ethical ideologies behind why the Nazi physicians performed such inhuman medicinal procedures on prisoners who did not fit their criteria of a future mass Aryan empire. There have been several historians who postulated theories based on the moral and or ethical reasoning of such procedures being performed on the inmates. The goal is to examine the works of past historians who have debated on this issue and then use their ideals to investigate the language of the doctors on trial in the Nuremberg Doctors Trials of World War Two. The transcripts of Reich Commissioner for Health and Sanitation Karl Brandt's trial will also be analyzed. The theory that at some point the doctors had some inclination that what they were doing was not all based off medicinal education, coercion, or psychological deficiencies will be supported by reviewing the trial and the events that lead up to Brandt's prosecution. By establishing this theory, a better understanding of the Nazi moral and ethical beliefs will be seen.

Name: Bianca LaVeglia

Title: Restitution and Retribution: The Saar Debates at the Paris Peace Conference of 1919

Faculty Advisor: Dr. Patrick Kelly, professor of history

Abstract: Most historical research regarding the Paris Peace Conference of 1919 focuses upon the decisions made over reparations and German demilitarization, but these were only two of the many momentous topics that were deliberated over during this unprecedented international summit. One of the lesser known, but no less important, issues debated regarded the Saar River Valley of Western Germany and its coal mines. While the French demanded control of the Saar as fair restitution for the French coal mines Germany had destroyed at the end of World War I, the Germans claimed separating the Saar from Germany would involuntarily part a largely ethno-German population from its "homeland." With both sides having valid claim to control of the area, a final decision was far from easy to formulate. While at times the Saar question was treated as a minor point, one that diplomats wanted to conclude as quickly as possible in order to move onto subjects they felt were more crucial, no topic and its handling better illustrated the unique personalities, agendas, and conflicts that manifested in Paris 1919. Using primary and secondary sources focusing on the debates, the decision makers, and the outcome of the issue, this research will demonstrate how decisions made over the Saar explain how the Paris Peace Conference of 1919 ultimately led to a "peace" that was far from "peaceful."

Name: Marissa Marinucci

Title: Fairy Tales Found in Translation: Moving from Italian to English in the works of Luigi Capuana (1839-1915)

Faculty Advisor: Dr. Jonathan Hiller, assistant professor of languages literatures and cultures

Abstract: In this presentation, I will discuss research I have undertaken as part of my semester-long project (for Italian 344, Italian Translation Techniques) translating the fairy tales of Italian novelist Luigi Capuana (1839-1915). His fairy tales, practically unknown outside the Italian-speaking world, are a valuable window into the folk traditions of nineteenth-century Sicily, traditions often forgotten but which have important resonances in the formation of Italian and Italian-American identity. My presentation will be on one page of text from Capuana's *C'era una volta* (Once Upon a Time), a page which was particularly difficult to translate and which required me to do significant research in deciphering its linguistic and cultural messages. My presentation will focus on the translation of a specific turn of phrase, "fare l'uovo" (making eggs) which is an idiomatic expression from the Sicilian dialect that the author uses several times in the fairy tale "Spera di Sole" ("Sphere of Sunlight"). This expression, which is not used in contemporary Italian, required me to find sources on Sicilian expressions and then to consult texts on American folklore in the search for an equivalent. In all my presentation will try to explain the complex process of translation and the rewards that research has brought me in moving Capuana's fairy tales from Italian into English.

Name: Bryan Montanari

Title: Signification is Dialectics: A Conversation Between Image and Text

Faculty Advisor: Dr. Louise Geddes, assistant professor of english

Abstract: This project addresses Roland Barthes' work on linguistic codes, imagery, and photographic denotation and connotation to create a new lexicon applicable to non-photographic advertisement images. I consider specific images in advertising that are constituted solely of text, requiring a linguistically-based structural analysis. In an image with an arrangement of text, the text becomes an image itself, entirely constituted by a message that occupies its "mode of existence", fully exhausting it. The photograph then, does not denote or represent, but is the physical referent of symbols that belong to a contextual, systematic, order of codes... a coded photographic language.

Name: Alexa Savino

Title: Ruminations on Positive and Negative Liberty in Revolutionary and Contemporary France

Faculty Advisor: Dr. Nicole Rudolph, assistant professor of languages literatures and cultures

Abstract: In the late 18th century, male and female revolutionaries of France utilized different approaches to remedy widespread unrest, consequently developing distinct interpretations of overarching political principles, such as the concept of liberty. This gave identifiable masculine and feminine "edges" to their exploration of major issues and questions. After analyzing gender dynamics during the French Revolution, this paper tackles a contemporary question: to what extent did the presidential campaigns of 2007 and 2012 reflect gendered interpretations of principles perceptible in France after the Revolution? Through textual analyses of news reports, party platforms, and interviews, this paper concludes that male and female candidates tend to emphasize negative and positive liberty, respectively, and explores how their policies and proposals suggest this trend. It also raises the following question: how does one's position on the political spectrum (the UMP and National Front of the Right; the Socialist Party, Communist Party, and EELV of the Left) affect, or alter, male and female candidates' expression of gendered conceptions of liberty? This research grapples with such questions to prove that liberty is not just the universal "blue" found on the French flag, but shades and variations of the color that give different hues to its meaning based on various external factors.

Name: Stephanie Schmidt

Title: Translating the Scientific: Researching Scientific Terminology to Translate a Nineteenth-Century Tale of Suspense

Faculty Advisor: Dr. Jonathan Hiller, assistant professor of languages literatures and cultures

Abstract: My presentation will discuss the research I had to do as part of my translation project, an English translation of the short story "A Vampire" by nineteenth-century Italian novelist Luigi Capuana (1839-1915). This research was conducted as part of the requirements for Italian 344, Italian Translation Techniques. Capuana's tale, which involves a young couple that is being tormented by a supernatural being, was dedicated to one of Capuana's close personal friends, scientist Cesare Lombroso (1835-1909). In the preface to the text, Capuana tells Lombroso that he intends to make use of all of science's latest findings in crafting the work. The protagonist of the story in fact calls in a noted scientist, a kind of literary representation of Lombroso, in an attempt to banish his ghostly tormentor. Capuana tries to sound authentically scientific in his portrayal of this character and so uses a lot of scientific terminology from the era when the tale was written, 1904. Therefore I needed to do a good amount of research into the "science" of 1904 and its terminological and conceptual framework. My presentation will be on one page of my translation where the scientific jargon was most prevalent. I will discuss the research I did on science and how this research helped me to move the text from Italian into English.

Name: Kaitlyn Seigneuray

Title: Lost my shoe again #cinderellaproblems: Contemporary Fairy Tales in the Information Age

Faculty Advisor: Dr. Louise Geddes, assistant professor of english

Abstract: With the reappearance of characters and events from eighteenth century fairy tales in popular media, the term fairy tale has come to hold different meanings in the contemporary imagination, especially in relation to the depiction of female strength and characters' awareness of their position as potentially fictional story characters. Emerging from the current culture in which a wealth of verified and unverified information is available to all types of people, the new entries in the genre are shaped by the "information age" in which we live. The ways and reasons this relationship between fairy tales and our culture functions are discussed.

Life Sciences and Physical Sciences

Life Sciences and Physical Sciences Undergraduate Poster Presentations

Name: Carlos Ballon, Jose Hernandez, & James Thomas

Title: Effect of Phenylalanine, Splenda and Nutrasweet Products on Neurite outgrowth in Pheochromocytoma PC12 cells

Faculty Advisor: Dr. Benjamin Weeks, professor of biology

Abstract: Phenylalanine is very significant to our body. It is a precursor for tyrosine, norepinephrine (noradrenaline) and epinephrine (adrenaline) and it has both analgesic and antidepressant effects. Phenylketonuria (PKU) is a type of autosomal recessive metabolic genetic disorder whereby the enzyme phenylalanine hydroxylase (PAH) nonfunctional and unable to metabolize phenylalanine. Due to this effect of high levels of phenylalanine on metabolism on such patients, we hypothesized that pure phenylalanine, and phenylalanine supplemented products such as splenda and nutrasweet would have detrimental and inhibitory effects on neurite outgrowth in PC12 cells. In order to test this hypothesis, PC12 cells were treated with phenylalanine, splenda and nutrasweet at concentrations based on baseline, hyper and hypo concentrations phenylalanine human blood serum levels. However, it was evident through qualitative observation, that phenylalanine had a stimulatory effect on neurite outgrowth, while splenda had inhibited neurite outgrowth. Experimental aspects such as varying confluence within experimental groups and phenylalanine that is present in the DMEM growth medium were taken into account during analysis. In order to depict a clinical situation regarding PKU, it would be relevant and of interest to observe PC12 cells with the nonfunctional PAH mutation.

Name: Afrain Bobby, Anthony Collado, Donguk Nam, Caroline Coicou, & Christie Racine

Title: Insufficient Sleep Derived From Seven-Day Diary, Habitual Sleep Time, And Actigraphy

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: Mixed results have been reported regarding the prevalence of insufficient sleep (IS) (<6 hours). This may be attributable to different methods (e.g., sleep diary, time-use sleep estimate, and actigraphy). We compared estimates of IS derived from these three measurement techniques. Data emanated from a sample of postmenopausal women (mean age=67.71±7.87 years) participating in the Women's Health Initiative study. Sample included Non-Hispanic White, 72%; Hispanic, 14%; Black, 9%; and Other, 5%. At the beginning of the study, volunteers estimated their habitual sleep time (HST). Thereafter, sleep was continuously recorded for 7 days using the Actilume (ACT) while maintaining a seven-day diary (SDD). Volunteers maintained usual daily routines including work, intimacy, exercise, and bedtimes. Actigraphic data was recorded every minute and quantified using the MAXACT modality. Based on SPSS analysis, 20.6% of the sample reported IS using SDD; 15.6% reported IS with HST; and 47.4% experienced IS based on ACT. Consistent with recent interest in relationships between IS and obesity, we ascertained associations of each of these estimates of IS with obesity. Logistic regression analysis showed that the odds of obesity associated with IS varied based on measurement techniques. For SDD, odds ratio [OR] was 1.03 (95% CI: 0.52-2.06, NS). For HST, OR was 2.26 (95% CI: 1.18-4.29, p<0.01). For ACT, OR was 2.13 (95% CI: 1.29-3.50, p<0.001). Estimates of insufficient sleep derived from sleep diaries, time-use estimates, and actigraphy are markedly different from each other. IS derived from actigraphy yields the greatest odd of being obese, followed by time-use sleep estimates.

Name: Anthony Collado

Title: Lipid-Related Cardiovascular Disease Markers and Sleep Apnea

Faculty Advisor: Robert Schwarts

Abstract: Studies show mixed results regarding associations between dyslipidemia and sleep disturbances. This study explored the relationship between lipid markers, which are predictors of cardiovascular disease, and sleep disorders in a nationally representative US adult population. Analysis was based on the 2007-2008 National Health and Nutrition Examination Survey. Physical examinations and laboratory tests were performed in mobile medical facilities to collect medical and physiological data. Insomnia was defined either as a reported diagnosis or by any of the 3 common symptoms: trouble falling asleep, waking up during the night or early in the morning. Sleep Apnea was defined either as a reported diagnosis or by any of the 3 common symptoms: snoring, breathing cessation, or excessive daytime sleepiness. Short (<6 hours) and long (>8 hours) sleep were also assessed. Cardiovascular disease risk prediction was determined by total cholesterol (≥ 200 mg/dL) and high-density lipoprotein cholesterol (<40 mg/dL). 6,546 respondents (mean age =45.8 years; female=51%) answered questions about sleep disturbances. The prevalence of diagnosed sleep apnea and insomnia was 2.76% and 1.05%, respectively and of short and long sleep 10.28% and 5.28%, respectively. Prevalence of symptoms of insomnia and sleep apnea was 33.23% and 23.15%, respectively. Multivariate-adjusted logistic regression analysis showed total cholesterol (OR=1.18, 95% CI: 1.01-1.37) and HDL-C (OR=1.26, 95% CI: 1.05-1.51) were the most important lipid related markers associated with sleep apnea symptom. Our analysis of epidemiologic sleep and lipid data suggest individuals reporting proxy symptoms of sleep apnea have a higher risk for lipid related cardiovascular disease markers.

Name: Joseph Geiger, Morgan Mahony, & Jennifer Lore-Ayala

Title: FT-NMR of Aspirin and Caffeine

Faculty Advisor: Dr. Stephen Goldberg, professor of chemistry

Abstract: In this paper, student projects are given as an example on how to introduce FT –NMR into the undergraduate curriculum.

We will incorporate NMR experiments that illustrate the application of high resolution NMR spectroscopy to the structure determination of Aspirin and Caffeine.

High resolution ^{13}C and ^1H NMR, ^{13}C –distortionless enhancement by polarization transfer (DEPT), 2D ^{13}C - ^1H correlated (HECTOR), and 2D ^1H - ^1H correlated (COSY) spectroscopy techniques will be used for elucidating skeletal arrangement of monomer units. The advantages of FT-NMR as an analytical tool are well known but the suitability of the method as an excellent educational tool for the training of students in research may not be as wide spread as many believe this project may demonstrate that the latter attribute by describing research projects which involve undergraduate students. This paper would also like to address how FT-NMR in the undergraduate curriculum is highly beneficial to the entrance of students to graduate careers in Chemistry, Biology and Physics. The projects include: FT-NMR of Aspirin and Caffeine, (proton, carbon, COSY, HSQC). The involvement in original research, training in advanced techniques, extension of knowledge beyond the standard curriculum, and close supervision with faculty members make the undergraduate research experience highly beneficial to the student.

Name: Jami DeGrote

Title: Synthesis of 7-hydroxy-4,4,4-trifluoromethylcoumarin (HFC) for Cytochrome P450 High-Throughput Fluorometric Assays via the Pechmann Reaction

Faculty Advisor: Dr. Melissa VanAlstine-Parris, assistant professor of chemistry

Abstract: Coumarin derivatives are common substrates for cytochrome P450 fluorometric assays. Due to the fact that these derivatives are relatively expensive to purchase and difficult to find, it is ideal in our undergraduate research laboratory to synthesize them from less expensive starting materials. The goal of our research is to synthesize various coumarin derivatives to be used in fluorometric assays of the cytochrome P450 enzyme family. The Pechmann condensation can be used to synthesize many coumarins from a phenol and ester containing a beta-carbonyl group. We have synthesized 7-hydroxy-4,4,4-trifluoromethylcoumarin (HFC) from resorcinol and ethyl-4,4,4-trifluoroacetate. The starting materials as well as iodine, the catalyst, and toluene, the solvent, are heated at 60°C for three hours, monitoring by TLC. After the reaction is complete it was diluted with ethyl acetate, washed with water, and dried over sodium sulfate. The product was purified through flash chromatography and decolorized over charcoal. Its structure was confirmed by ¹H NMR. Next, we plan to synthesize 7-methoxy-4,4,4-trifluoromethylcoumarin, 7-ethoxy-4,4,4-trifluoromethylcoumarin, and 7-benzyloxy-4,4,4-trifluoromethylcoumarin using the same reaction but altering the starting materials.

Name: Martin Disla, Brian Kaufman, John Dellatto, & John Mavroudes

Title: Progress Towards Laser Cooling a Dense Beam

Faculty Advisor: Dr. Matthew Wright, assistant professor of physics

Abstract: Recent experiments have demonstrated the laser cooling of an ultradense atomic gas by collisional redistribution of fluorescence; a technique that has been demonstrated to cool atomic ensembles of alkali atoms and Nobel gases. We are investigating the feasibility of applying this technique to laser cool atoms in an atomic beam. While typically atomic beams tend toward lower densities, it is possible to have a region of high density right as the atoms exit into the beam from an oven or cryogenic source (e.g., supersonic beams). Inelastic collisions between atoms are controlled via light that is red detuned from the atomic resonance frequency, exciting the atom-pair at short range when the energy difference between the levels match the energy of the incoming photon. After the collision, the atom-pair spontaneously emits a higher energetic photon at long range, resulting in a net loss in the thermal energy of the gas. As a proof-of-principle experiment, we are constructing a dense beam of Rb atoms at 500 K with an initial density of 10^{16} cm³ and plan to attempt cool the atoms with laser light ($I_0 \sim 20$ W/cm², $\Delta \sim 20$ GHz).

Name: Amanda Espinosa, Talal Perez, Ravetal Yakubov, & Cynthia Mejia

Title: The Effect of Progesterone on Neurons And Neurite Growth

Faculty Advisor: Dr. Benjamin Weeks, professor of biology

Abstract: PC12 cells are ideal cells to study due to their ability to grow in vitro. Studying PC12 cells neuronal outgrowth can potentially lead to medical advancement. Progesterone is the most important hormone during pregnancy. There has been a study shown that progesterone can reduce inflammation and apoptosis that occurs at the cellular level when traumatic injuries occur. Due to progesterone having a positive effect on damage cells, progesterone may allow our PC12 cells to grow larger neuronal outgrowth. It is hypothesized that the higher the dosage of progesterone added to the PC12 cells, the larger the neuronal outgrowth will be. Therefore, it is believed that 2µl of progesterone added to the PC12 cells will display larger neurites. Some material used in this experiment was PC12 cells, NFG, DMEM, FBS and what was being tested the progesterone. Three different levels of progesterone was tested on the PC12 cells, the highest dosage being 2µl, the medium dosage being 1µl and the lowest dosage being 0.5µl. From the results gathered, our hypothesis was proven correctly. This means that progesterone did play a role in the growth of the neurites.

Name: Natalia Gmuca

Title: The Fat and the Furriest: Morphological Changes in Harp Seal Fur with Ontogeny

Faculty Advisor: Dr. Heather Liwanag, assistant professor of biology

Abstract: The harp seal (*Pagophilus groenlandicus*) is a phocid seal species whose range extends from the North Atlantic to Arctic Oceans. Adult harp seals primarily use blubber for insulation, but newborn harp seals instead rely on their fur coat while their blubber layer develops. Harp seal pups are weaned abruptly, less than two weeks after birth, and must learn to swim and dive in frigid waters on their own. This study examines how the morphological characteristics of harp seal pelts change with age. We are comparing hair length, circularity, shape of the cuticular scales, as well as fur density for neonates (1 day old, N=3), newly weaned pups (2 weeks old, N=4), molted pups (3 weeks old, N=4), and adult harp seals (N=4). Hairs are shorter and guard hairs are flatter in older animals, consistent with an increased reliance on blubber and more time spent in the water. Fur density also declines with age, primarily due to a decrease in underhairs. Ultimately, these results will be compared to data collected on the thermal conductivity of harp seal fur in air and in water, in order to determine whether observed differences in hair structure are correlated with its ability to insulate.

Name: Yuseok Jung

Title: The Synthesis of 2-Iodo Adenosine from Guanosine as a Precursor of the Synthesis 2-Trifluoromethyl Adenosine Tri-Phosphate for Nuclear Magnetic Resonance Spectroscopy

Faculty Advisor: Dr. Melissa VanAlstine-Parris, assistant professor of chemistry

Abstract: Nuclear magnetic resonance (NMR) spectroscopy on monofluorated adenosinetriphosphate (ATP) has been shown moderate success on ^{19}F NMR-based methods for enzyme screening experiments. Most of living cells utilize ATP as an energy source by kinase. 2-Trifluoromethyl adenosinetriphosphate (2-CF₃ ATP) is a derivative of ATP with trifluoromethyl group (CF₃) on C2 position. CF₃ can produce amplified signals on ^{19}F NMR spectroscopy due to the three fluorines in its structure. It is expected to obtain better result on ^{19}F NMR enzyme screening analysis with 2-CF₃ ATP compared to using monofluorated ATP. 2-trifluoromethyl adenosinetriphosphate (2-CF₃ ATP) will be synthesized by going through the key intermediates; 2-iodo adenosine and 2-trifluoromethyl adenosine. A small amount of 2-iodo adenosine had been synthesized by replicating precedent literature. In order to increase the reactivity for better yield, an alternative method of trapping ammonia, the reagent, will be tried.

Name: Kimberly Kossoff

Title: Multisensory integration of audiovisual speech under natural listening conditions: An fMRI investigation

Faculty Advisor: Dr. Lars Ross, assistant professor of psychology

Abstract: When listening to a speaker in face-to-face conversation the percept of the words and sentences are experienced by the listener as primarily auditory in nature. It remains unnoticed that the percept is affected by the speaker's articulations and that the representation of the speech stimulus is, in fact, an amalgam of inputs from the visual as well as auditory modalities. Research using magnetic resonance imaging (MRI) has been conducted to determine how the brain binds information from different sensory modalities in general and speech signals in particular (e.g. Calvert et al., 1999). Common findings include effects of visual speech on processes in primary auditory and regions in the posterior superior temporal gyrus and sulcus (STG/S) of the temporal lobes. A major drawback in many previous imaging experiments is that they used artificial stimulus material, mostly consisting of syllables or isolated words far removed from speech perception as it occurs in a natural context. In this experiment that was designed to resemble more natural listening conditions we presented participants with the video of an actress reading "The LORAX" by Dr. Seuss while their brain activation (blood oxygen level dependent response or "BOLD") was recorded in the MRI scanner. During the continuous narration of the story, segments were presented as either "auditory alone", "visual alone", and two different "audiovisual" conditions where the speaker can be seen as well as heard. I characterize differences between multisensory effects found in this experiment and findings of previous, considerably more artificial experiments.

Name: Monika Mohacsi

Title: Bone Penetration Analysis with Ancient Greek Weapons

Faculty Advisor: Dr. Sean Bentley, associate professor of physics

Abstract: During the Archaic Period, the Greek people used arrows, spears, and hand tools as weapons in combat, as many studies have shown from skeletal remains and artifacts. Although many anthropological studies and reports have been done on these cases, not many studies have taken a physics approach, which is the route I have taken with this research. With the findings, we hope to be able to know more about different aspects of ancient life through physics and open up new insights to archaeological finds. We are analyzing the force and impact needed to penetrate bones with these primitive weapons by accurately modeling the leather armor of the time period and simulating human tissues and bones of several regions of the body. A force meter measures the stabbing forces exerted on the model and with this data I then calculate the impact needed to penetrate armor, skin, and bones at certain parts of the body with these weapons. The experimental data is then compared to previous models to analyze the accuracy of previous assumptions.

Name: Brianna O'Neill & Michael Boodoo

Title: Polyindole/CdTe Nanohybrids for Solar Cells Applications

Faculty Advisor: Dr. Justyna Widera, associate professor of chemistry

Abstract: Silicon solar cells are currently used in commercial and domestic solar energy conversion. Due to the high manufacturing costs of these cells and less than ideal efficiencies, alternate materials are being developed. The goal of this project is to develop a novel, inexpensive, highly efficient organic/inorganic semiconducting hybrid material. This research focuses on synthesis and characterization of an organic semiconductor - polyindole (conjugated polymer) and the inorganic semiconductor - cadmium telluride (quantum dots). These materials were electrochemically synthesized on indium tin oxide and platinum electrodes. The electrochemical properties of these materials were investigated using cyclic voltammetry, and their morphology was determined using atomic force microscopy. The thickness, porosity and morphology of polyindole and CdTe thin film deposits were determined. These two materials have been combined into p-n junction nanohybrid. Current research efforts concentrate on optimization of nanohybrid synthesis conditions.

Name: Rajiv Pasricha

Title: Over Expression of HIF-2a in RCC10 cell lines

Faculty Advisor: Dr. Alan Schoenfeld, chair and associate professor of biology

Abstract: Von-Hippel Lindau disease is a rare autosomal dominant genetic condition characterized by mutations within the tumor suppressor gene, VHL. The resulting effects of these mutations include tumor growth, thus leading to subsequent forms of cancers. These would include: renal cell carcinoma, pheochromocytoma, and hemangioblastomas. VHL operates through an E3 ligase complex, which is responsible for the proteasomal degradation of Hypoxia-Induced factor (HIF- α). The absence of VHL (due to pVHL mutation) causes resulting increases in HIF- α levels, a regulatory transcription factor involved in the over expression of genes involved within angiogenesis and metabolism. This up regulation has also been shown to stimulate tumorigenesis. The cancerous cells, which arise as a result of the mutation, can express two distinct isoforms of HIF α : HIF-1 α and HIF-2 α . This has been shown particularly within renal cell carcinoma. It was suspected through various experiments conducted, that the up regulation of these isoforms would influence apoptotic activity. To examine this, apoptosis assays were conducted in RCC10 cell lines. The cells were exposed to various stresses, including UV radiation, glucose free media, or serum free media. Through PARP-1 and Caspase cleavages, visualized through Western blot), apoptosis could be further tested. It is expected that, HIF-2 α will be more pro-apoptotic, as opposed to HIF-1 α .

Name: Lauren Pastolove

Title: Climate Change in the Arctic Region: A Deeper Look at Our Ever-Changing Future

Faculty Advisor: Dr. Jessica Dutton, assistant professor of environmental studies

Abstract: Computer simulation models have shown that the Arctic region will undergo many dramatic changes due to global warming. The greatest impact in the region to date is the shrinking and thinning of the sea ice; over 2 million km² has been lost in the last 10 years, and the floating sea ice is now 50% of the size it was in 1980. During summer 2012, the Arctic sea ice shrunk to its smallest size since research began in 1978. Scientists are conflicted as to when the Arctic Ocean will be ice free during the summer months; some predict it will be by 2040, whereas other scientists predict it will be within the next few years. This affects marine mammals, including the polar bear (*Ursus maritimus*) that rely on the floating ice platform to hunt; the accelerated loss of their habitat resulted in the polar bear being added to the U.S. Endangered Species Act in 2008. Arctic sea ice loss is attributed to the rapid warming of the Arctic region; temperatures were 3.5°C warmer in 2008 than they were between 1950 and 1980, and are expected to increase by up to 7.5°C by the end of this century. Further disappearance of the sea ice will enhance future warming in the region because less solar radiation will be reflected back to space. Other implications including the melting of the permafrost, potential shutdown of the ocean conveyor belt, and the search for oil beneath the Arctic seafloor will also be discussed.

Name: Michelle Sydlo

Title: The Effects of Pollution on *Illynaea Obsoleta*

Faculty Advisor: Dr. Aaren Freeman, assistant professor of biology

Abstract: The effects of polluted sediment on the eastern mud snail *Illynaea obsoleta*. The heavily polluted site is Jamaica Bay. Research has shown that Jamaica Bay has high levels of heavy metals & other toxins specifically mercury. The less polluted site is Glen Cove. This experiment simulated the habitats of each estuary in order to test the hypothesis that snails from Jamaica Bay are acclimated to pollution and will grow larger in polluted sediment than snails from the 'clean' site. The replicates contained 1 inch of sifted sediment and 2 inches of water. Half of these will hold sediment from Jamaica bay and the other half will be from Glen Cove. Snails were collected from both sites. Measurements of length were made after 5, 10, 20 weeks, Additional measurements of tissue and shell were taken at the end of the experiment. Data and results are currently being analyzed.

Name: Erin Taub

Title: The Effect of Substrate Concentration on the Activity of CYP2A6 with the Use of High-Throughput Screening

Faculty Advisor: Dr. Melissa VanAlstine-Parris, assistant professor of chemistry

Abstract: Cytochrome P450 (CYP) is a class of enzymes that metabolize toxins in the body and can be found in the human liver. CYP2A6 is known to hydroxylate coumarin and metabolizes nicotine. One way to monitor the activity of the reaction is to use fluorometric high-throughput screening. Coumarin is a substrate for CYP2A6, which has a fluorescent product 7-hydroxycoumarin (7-HC). Many components of the enzyme assay can have an effect on the reaction process like substrate concentration, pH, buffer used or buffer concentration, temperature and time. When altering these components of the reaction it can cause great changes in the enzyme activity or have no effect at all. In testing the fluorescence of 7-HC in both Tris and potassium phosphate we found that Tris adds background noise to the signal of 7-HC. However, it is known that potassium phosphate inhibits the reaction; therefore, Tris is the preferred buffer to use. In testing, we also found that the fluorescence is more sensitive at a basic pH. Currently we are changing the substrate concentration to determine the maximum velocity and the Km value. By altering the different components of the enzyme assay, we can find the optimal conditions under which the enzyme assay runs. The goal is to be able to test inhibitors on the enzyme assay and in order to do this the optimal conditions of the reaction must be known.

Name: Lauren Tesoriero

Title: Development of Microsatellite Markers for the Study of Spider *Argiope aurantia*

Faculty Advisor: Dr. Aram Stump, assistant professor of biology

Abstract: Extreme size sexual dimorphism, in which conspecific males and females largely differ in size, is hypothesized to be a result of the divergent evolution of the two sexes of the species. In spiders, there is great variability of this dimorphism, in which the females are generally larger than the males. In order to better understand the evolution of the dimorphism, it is important to study the mating structure of these organisms in the wild. We are working on developing polymorphic microsatellites (also known as Simple Sequence Repeats) that will be beneficial in paternity studies of the spider *Argiope aurantia*. Next generation sequencing was used to produce a large number of sequences from extracted DNA of the spiders, and msatcommander was used to locate potentially useful microsatellites and design primers specific to them. We are in the process of screening a preliminary set of microsatellites to determine which will be useful for population research of the spiders. In analyzing these sequences, we can gain insight about the variability of the sequences within the population.

Name: Samantha Zukowski

Title: Using ^{19}F -NMR to Create an Assay for CYP19A1 with 7-Methoxy-4-trifluoromethylcoumarin

Faculty Advisor: Dr. Melissa VanAlstine-Parris, assistant professor of chemistry

Abstract: Cytochrome P450s, CYPs, are a class of enzymes that catalyze the metabolism of exogenous and endogenous substances. Some CYPs, like CYP19A1, are specialized to metabolize only a few compounds. CYP19A1, also known as aromatase, converts androgens into estrogens. Fluorometric enzyme assays are a reliable way to monitor the reaction progress of enzyme CYP19A1 with 7-methoxy-4-trifluoromethylcoumarin (MFC) to form 7-hydroxy-4-trifluoromethylcoumarin (HFC). The relative fluorescence unit data obtained from different concentrations of HFC and MFC can be used to create a standard curve. The slope of the standard curves developed can then be used to gauge the progress of a reaction. NMR spectroscopy is also used for assays. Since MFC and HFC contain fluorine, ^{19}F -NMR may also be used to monitor the same reaction. This research involves attempting to develop an enzyme assay with NMR standard curves that can be used as a new method to track CYP19A1's reaction, as well as if one method is more efficient or accurate than the other. The goal is to develop a standard curve for HFC using ^{19}F -NMR at (experimentally determined) feasible concentrations, perform assays to monitor enzyme activity, and compare those results with an assay performed using fluorescence spectroscopy. Preliminary ^{19}F -NMR spectra have determined that HFC and MFC are at chemical shifts with a clearly observable range of ppm between them. Therefore, the formation of HFC can be monitored, and the goal is plausible.

Life Sciences and Physical Sciences Undergraduate Oral Presentations

Name: Santo Abraham

Title: The Effect of Atypical PKC on Renal Cells With or Without VHL

Faculty Advisor: Dr. Alan Schoenfeld, chair and associate professor of biology

Abstract: Inactivation of the VHL tumor suppressor gene is responsible for an increased risk of cancer formation in VHL disease, an inherited cancer syndrome that predisposes victims to a number of tumors, both benign and malignant such as renal cell carcinoma, hemangioblastoma, and pheochromocytomas. The product of the VHL gene, (pVHL), is essential to the E3 ubiquitin ligase complex that targets particular substrates for ubiquitination and subsequent degradation. One potential target of pVHL ubiquitination is atypical PKC (aPKC). There are two isoforms of aPKC, PKC iota and PKC zeta. Previous studies have reported that pVHL binds to active aPKC, causing its ubiquitination. Since both VHL and atypical protein kinase C promote the same cellular phenotypes such as regulation of certain integrin levels, organization of intercellular junctions, and maintenance of cellular differentiation and survival, we hypothesize that wild-type VHL will promote proper aPKC function instead of regulating its degradation. In this study, we are working with RCC10 renal carcinoma cell lines. We are interested in better understanding the relationship between aPKC and VHL function. Through retroviral infection, we introduced 3 versions of the PKC iota isoform (wild-type, catalytically active and dominant negative) into RCC10 cells that are lacking or have VHL. We are performing experiments that will analyze various cellular phenotypes in these cell lines, to determine the interplay between VHL and atypical PKC.

Name: Halvor Adams

Title: The Effect of Wave Exposure on the Investment of Reproductive Effort of Nucella Lapillus

Faculty Advisor: Dr. Aaren Freeman, assistant professor of biology

Abstract: Nucella lapillus is a species of intertidal marine snail with a distribution that ranges from Long Island to Newfoundland, and across Europe. They live in the intertidal zone, feed on mussels, and are eaten by crabs. Nucella lay egg masses, which are approximately 5 mm long and shaped like vases, on rocks in the intertidal zone along the coast. The purpose of this experiment was to investigate the influence of wave exposure on Nucella reproductive effort. I believed that environmental factors related to wave exposure, such as tidal displacement, would have an effect on the development of Nucella. Egg masses and mature snails from regions of different wave exposure in southeastern Maine along with additional Nucella population data collected from each site were collected over the summer of 2012 and brought back to Adelphi. I photographed the Nucella egg masses intact and then just the egg masses after they were bisected and taken out of the casings. I analyzed these photographs using ImageJ software comparing the surface area between egg masses from a variety of different populations. I hypothesized there would be a statistically significant difference in Nucella populations from different wave exposure environments in the categories of number of Nucella eggs per quadrat, egg volume, number of Nucella per quadrat, and Nucella average length. The results indicate that wave exposure was the only fixed effect that had a statistically significant effect on the number of eggs per quadrat, egg volume, and Nucella length per quadrat. The number of Nucella in wave protected and wave exposed sites did not differ, however the larger snails at wave protected sites produced more egg masses and larger egg masses. Wave exposure coupled with other environmental difference correlated to the wave exposure, such as temperature variation, could explain these differences. In future experiments, I plan to investigate if Nucella from populations with different wave exposure environments have different responses to ambient temperature and predator cues.

Name: Mohammed Ahmadi

Title: Demonstration of Antibiofilm and Antifungal Efficacy of Nitric Oxide Releasing Nanoparticles against *Candida albicans* Biofilms

Faculty Advisor: Dr. Luis R. Martinez, assistant professor of biomedical science, Long Island University

Abstract: *Candida albicans* biofilms are a major cause of human mortality and recalcitrant to most treatments due to intrinsic drug resistance. These complex communities of multiple cell types form on indwelling medical devices and their eradication often requires surgical removal of infected devices. It is therefore imperative that innovative therapeutics to which the microbes are unlikely to evolve resistance be developed to curtail associated morbidity and mortality and ultimately improve our capacity to treat these infections. To address this clinical problem, we have recently developed a simple and stable silane hydrogel nanotechnology capable of delivering nitric oxide as a potential therapeutic. NO is known to have direct antifungal activity and modulate host immune responses. Notably, NO-np have proven high efficacy against multi-drug resistant bacteria that are challenging the success of antibiotic use. In this study we hypothesized that nitric oxide releasing nanoparticles (NO-np) would be therapeutically effective for treatment of *C. albicans* biofilms on catheters. Using a central venous catheter *C. albicans* biofilm model, we demonstrated that NO-np inhibits candidal biofilm formation in vivo. Furthermore, NO-np statistically significantly decreased both the metabolic activity of the biofilms and the cell viability of *C. albicans* biofilms in vitro. In addition, microscopic examination demonstrated that NO-np penetrates candidal biofilms and damages fungal cells, most likely by arresting its growth and morphogenesis. Together, these data suggest that NO-np should be considered for the prevention or treatment of fungal biofilms on central venous catheters and perhaps other medical devices.

Name: Frances Fan

Title: Rapamycin as a potential treatment for SDH mutations in *Drosophila melanogaster*

Faculty Advisor: Dr. Eugenia Villa-Cuesta, assistant professor of biology

Abstract: Mitochondria are cellular organelles responsible for the production of almost all energy used by animal cells. Mutations in crucial proteins of the mitochondria cause pathology affecting multiple organ systems; many different disorders can result, ranging from neurodegeneration to cardiomyopathy, and often leading to death. *Drosophila melanogaster* is an ideal model system for the study of genetic mitochondrial disease since there are multiple established mutations present in different proteins involved with mitochondrial function, such as succinate dehydrogenase (SDH). Numerous mutations in three different polypeptide subunits have been developed in *Drosophila* SDH, each of which contribute to degenerative disorders. Preliminary data indicates that the drug rapamycin, currently in use to prevent organ rejection in transplant patients, increases the level of SDH activity. We will test the hypothesis that rapamycin protects from mutant pathology in *Drosophila* exhibiting mutations in subunit B of the SDH protein.

Two different SdhB mutant strains of *Drosophila*, along with a wild-type strain, will be treated with rapamycin administered through diet. The climbing abilities of the flies will be assayed to determine the effect of different dosage levels of rapamycin on mutant SdhB enzyme activity and overall mitochondrial performance. Assessing the role of rapamycin as a potential drug in *Drosophila* SDH mutants contributes to the current research seeking a treatment for genetic mitochondrial disease in humans.

Name: Shaun Gu

Title: A Phylogenetic Mapping of SMN1, SMN2 and their Paralog SPF30 as a Strategy for Improving Current Insight into the Molecular Genetic Pathology of Spinal Muscular Atrophy.

Faculty Advisor: Dr. Aram Stump, assistant professor of biology

Abstract: Spinal Muscular Atrophy is an autosomal, degenerative, neuromuscular disease characterized by a functional deficiency in the alpha motor neurons located in the anterior horn of the human spinal cord. SMN protein is encoded by SMN1 and SMN2, which share a 99.9% identical amino acid sequence. SMN is involved in the formation of the spliceosome, a structure responsible for the snRNP assemblage and the removal of introns from pre-mRNA transcripts. A missense mutation in SMN2's seventh exon prevents oligomerization, increasing its likelihood of becoming degraded. Thus SMA is characterized as a genetic impairment resulting from lack of sufficient SMN protein production, rather than a homozygous loss of the gene. This project focused on the phylogenetic mapping of SMN1, SMN2 and their paralog SPF30, expanding on previous deuterostome research by incorporating protostomes and non-deuterostome/non-protostome species. Multiple logarithmic, phylogenetic and bioinformatics-based program results demonstrated that the SMN paralogs in juxtaposition to SPF30 are genes with similar function, but have evolved independently of one another. PAML dN/dS analysis, designated as ω , analyzes two model systems, which differ based on number of transcript site classes, analyzing a non-synonymous to synonymous substitution ratio. Primate and Laurasiatheria groupings (containing multiple SMN, SPF30 copies), demonstrated a significant difference in site model data, signifying that SMN and SPF 30 have been evolving under positive selection. Additionally, SMN and SPF30 have indicated a conservation of sequence throughout various *Drosophila* species based on these dN/dS, ω site models produced by PAML.

Name: D'Ana Milo

Title: Changes in axial movement of the ropefish, *Erpetoichthys calabaricus*, as it moves between aquatic and terrestrial environments

Faculty Advisor: Dr. Andrea Ward, associate professor of biology

Abstract: A variety of elongate Actinopterygians, or ray-finned fishes, have been found to move in and out of aquatic environments. One example is, *Erpetoichthys calabaricus*, known commonly as the ropefish, has been known to cross between bodies of water by traveling terrestrially. Previous studies have found that the undulatory patterns applied by the ropefish while swimming differ from those applied when moving terrestrially. It is speculated that there is a gradual transition between the two modes as the organism crosses between the two mediums. However, this transition has not been tested directly. The goal of this study was to examine the changes in the undulatory patterns of the ropefish by filming individuals as they moved down an incline from a completely terrestrial, to a completely aquatic environment. I found that fish change their movement pattern once contact is made with the water. This experiment provides a better understanding of how the ropefish, and potentially other fish locomote terrestrially, alter their locomotory patterns when transitioning between different environments.

Name: Michael Record

Title: Bioaccumulation and Trophic Transfer of As, Cd, Cu, Hg, Pb, and Zn in Two Contaminated Salt Marshes on the South Shore of Long Island

Faculty Advisor: Dr. Jessica Dutton, assistant professor of environmental studies

Abstract: Metal accumulation in estuarine food webs in heavily industrialized and urbanized coastal areas is receiving increasing attention, because field studies have shown that sediment and water have elevated levels of metals due to anthropogenic activities. This has resulted in an elevated body burden of metals in estuarine organisms, which can potentially impact the health of the organism themselves, their predators, and ultimately human consumers of contaminated seafood. In the present study, we measured the concentration of As, Cd, Cu, Hg, Pb, and Zn in sediment, water, and biota collected from two contaminated salt marshes (Bay Park and Inwood Park) using ICP-MS, to investigate whether each metal biomagnified or biodiminished with increasing trophic level. The investigated biota included: saltmarsh cordgrass (*Spartina alterniflora*), sea lettuce (*Ulva lactuca*), marsh grass shrimp (*Palaemonetes pugio*), ribbed mussel (*Geukensia demissa*), Atlantic silversides (*Menidia menidia*), killifish (*Fundulus heteroclitus*), blue crab (*Callinectes sapidus*), and the eastern mudsnail (*Ilyanassa obsoleta*), which represents a typical estuarine food web. Metal concentrations in biota were consistently higher in Bay Park than in Inwood Park, and Cu and Zn were found at the highest concentrations. *I. obsoleta* had the highest concentration of all metals. Every metal was shown to bioaccumulate, whereas Hg and Zn were shown to biomagnify, and Cd and Pb were shown to biodiminish with increasing trophic level. Understanding metal behavior in estuarine food webs enables us to better predict the impacts of metal exposure on the ecosystem and human consumers of seafood.

Name: Sajan Shrestha

Title: Double-slit quantum-eraser experiment using momentum-entangled photons,

Faculty Advisor: Dr. Sean Bentley, associate professor of physics

Abstract: Momentum-entangled photons are produced by Type II spontaneous parametric down-conversion (SPDC) and which-slit information is encoded by directly correlating the transverse spatial modes of the signal and idler beams. Erasure is achieved by superimposing two halves of the idler beams using a symmetric beam splitter.

Name: Michael Trietsch & Kvashnin Yevgeniy

Title: Incoherent broadband cavity enhanced absorption spectroscopy for trace measurements of NO₂ with an LED source

Faculty Advisor: Gottipaty Rao, Andreas Karpf

Abstract: We report on the development of a sensor for environmental monitoring of Nitrogen dioxide (NO₂) employing Incoherent Broadband Cavity Enhanced Absorption Spectroscopy. Monitoring Nitrogen Dioxide in the atmosphere is of great importance since NO₂ is an active participant in atmospheric chemistry and is responsible for smog, tropospheric ozone, acid rain, and is a greenhouse gas. NO₂ is produced in combustion processes and is emitted, for example, by automobiles and power plants. The experimental arrangement for the detector consists of a high power violet (400 nm) LED source (LedEngin LZ1-00UA00), collimation arrangement, an optical cavity (20 cm length) fitted with high reflectivity mirrors, followed by a focusing arrangement and an "Ocean Optics" model HR4000 spectrometer. The optical cavity provides a long effective pathlength, allowing for the detection of low concentrations of NO₂. By using incoherent broadband cavity enhanced spectroscopy, the detector is not sensitive to vibrations, thus making it a good candidate for portable monitoring applications. The sensor is calibrated with a certified mixture of 1 ppm NO₂ and zero air. Since NO₂ is known to be extremely corrosive and is readily adsorbed by metal surfaces, the inside of the optical cavity and metal tubing is coated with Halocarbon wax. The experimental details, sensitivity of detection achieved, possible interference from water vapor and other atmospheric gases, and sensor performance will be presented.

Life Sciences and Physical Sciences Graduate Poster Presentations

Name: Diana Cristiano

Title: Latest Pleistocene Sedimentation on the NJ Upper Slope: Grain Size Analysis of Site 1073A

Faculty Advisor: Dr. Beth Christensen, director and associate professor of environmental studies

Abstract: Glaciation had a significant impact on the NJ continental margin. Although erosional processes dominated on the shelf, the continental slope was a site of deposition. This study evaluates the timing and nature of sedimentation on the latest Pleistocene New Jersey Ocean Drilling Program (ODP) Leg 174 slope Site 1073A (640 m water depth). Cores 1 and 2 were sampled 10cm intervals; samples were dried, rehydrated, and sieved (63 μ m); the fine fraction was analyzed with the Micromeritics Sedigraph 5120 for mass frequency of silt, clay, 12 phi and 13 phi.

Cores 1 and 2 the weight percent sand increases up core overall, and % silt, while variable, decreases up section from ~80% to ~40%. The % 12 phi generally follows the % clay, but the very finest grains (%13 phi) does not. Observations of the sediments in the >150 fractions indicates a change in sediment source around 2.84 mbsf; below the grains are predominantly quartz, and above it is oxidized mud fragments. This does not correlate with large changes in % silt or clay, and may be related to post-glacial depositional patterns on the shelf.

Name: Emily Dernbach

Title: Eat what you know: Feeding choices of *Nucella lapillus*

Faculty Advisor: Dr. Aaren Freeman, assistant professor of biology

Abstract: *Nucella lapillus*, is an important carnivorous molluscan predator on mussels and barnacles in the rocky intertidal. *Nucella*'s habitat distribution ranges from wave-protected sites to wave-exposed sites over a large geographic range in the North Atlantic. Water flow affects both *Nucella* morphology and behavior, as well as the movement and foraging efficiency of *Nucella*'s predators. In protected-shore areas, transient predators are capable of moving and consuming prey quickly; creating an area with a small abundance of mussels and a large abundance of algae and barnacles, in contrast to wave-exposed areas with higher numbers of mussels where increased risk of dislodgement by high wave action deters predators. Wave exposure influences on community structure may be under appreciated in mediating the influence of predator cues. In this study I compared the foraging of *Nucella*, and found that those from high flow areas do not respond as strongly to predators, most likely due to the more harsh/risky environmental threats and the decrease in predator movement and foraging efficiency. Overall, whelks collected from exposed areas consumed less than those from protected, and when combined with the presence of a predator, foraging was reduced even further. Additionally, whelks from exposed sites consumed more mussels than did those from protected when no predator was present, but this was not the case when a predator was detected. Suggesting that *Nucella* may switch to consuming barnacles despite more abundance of mussels in order to avoid contact with their predator since *Carcinus* also prey upon mussels.

Name: Danielle Sofferman

Title: High-Resolution Interference in Quantum Dot Thin-Films

Faculty Advisor: Dr. Sean Bentley, associate professor of physics

Abstract: We have developed a technique to write high resolution patterns onto quantum dot thin-films. This process can be used for optimizing the performance of electronics through optical lithography. A Nd: YAG laser system is used to inscribe nonlinear interference patterns onto the thin-films of the samples. We are able to examine and record the features of the diffraction pattern using a microscope connected to a high-resolution camera. After exposure, the thin-films have interference fringes on them which are a strong indicator of three-photon absorption.

Life Sciences and Physical Sciences Graduate Oral Presentations

Name: Kerri Ackerly

Title: The role of vertebral morphology in a fish eat fish world

Faculty Advisor: Dr. Andrea Ward, associate professor of biology

Abstract: Many selective factors work together to determine the optimal body morphology to maximize swimming performance in each species, especially in relation to escape responses, a crucial form of fish locomotion. In fishes, the vertebral column is one of the most important morphological elements in determining maximum swimming performance. Variation in vertebral morphology has been shown to significantly impact escape swimming performance, leaving individuals more susceptible to predation. Predation can become a strong selective force for vertebral phenotype within populations. Our previous work in zebrafish (*Danio rerio*) has shown that individuals with fewer vertebrae and a less favorable vertebral ratio are less efficient when performing their escape responses. This performance variation is a result of a decreased number of intervertebral joints present within individuals with a lower number of vertebrae, which decreases the range of axial skeleton flexion. The evaluation of the effects of morphology on performance and the subsequent effect of this performance on fitness is crucial for determining the adaptive nature of these various morphologies. We are currently working to make the connection between the ecological importance of vertebral variation and identify the selective factors behind it. To do this, we are exposing populations of zebrafish with various vertebral morphologies to native predators, needlenose garfish (*Xenentodon cancila*), to identify selective predation for certain vertebral morphologies. It is our hope that this series of predator-prey trials will help identify possible selective pressures that these and other aquatic ectothermic vertebrates may face as new threats arise in a rapidly changing climate.

Name: Candice Marcos

Title: From ice to ocean: Changes in the thermal function of harp seal fur with ontogeny

Faculty Advisor: Dr. Heather Liwanag, assistant professor of biology

Abstract: Pinnipeds (seals, sea lions, walruses) are a unique group of mammals that feed exclusively in the ocean, but return to land for breeding and molting. Harp seals (*Pagophilus groenlandicus*) live in the frigid environment of the North Atlantic and Arctic Oceans, and rely on their thick insulation to keep warm. Although adult harp seals primarily use blubber for insulation, newborn harp seals rely on a fur coat while their blubber layer develops. After harp seal pups are weaned less than two weeks after birth, they must learn to swim and dive in icy waters on their own. In this study, we examined changes in the thermal properties of harp seal fur with ontogeny. We measured thermal conductivity of harp seal pelts in air and water for neonates (1 day old, N=3), newly weaned pups (2 weeks old, N=4), molted pups (3 weeks old, N=4), and adults (N=4). Thermal function of the fur in air decreased with age, with the lowest thermal resistance in adult pelts. Thermal function of the fur was significantly reduced in water (compared to air) for all age classes. In adults, this decrease in thermal function was offset by a thick blubber layer. In contrast, the reduced fur function in water represented a significant reduction in total insulation for pups. Overall, the fur represents an important component of thermoregulation for harp seal pups on land, whereas the development of a thick blubber layer is key to their transition to a primarily aquatic lifestyle.

Name: Carolyn Trietsch

Title: Terrestrial invertebrate communities in isolated salt marsh patches within Middle Bay, South Shore Estuary, Long Island, NY

Faculty Advisor: Dr. Matthias Foellmer, associate professor of biology

Abstract: Salt marshes are home to a large variety of insects, amphipods, crustaceans, spiders and other invertebrates. These serve as food sources for other species, allowing estuarine salt marshes to function as nursery grounds for fish and migratory birds. Most of the original salt marshes in North America have been lost due to human activities, and the few wetlands that remain are threatened by factors such as pollution, land development and climate change. Little is known to date about the invertebrate diversity of the remaining salt marsh patches in the South Shore Estuary and how, for example, diversity and food web structure may be impacted by human activities. I extensively sampled the arthropod communities at three isolated marshes in 2011 to establish a large base-line data set on the diversity and phenology of marsh arthropods, with the goal of generating hypotheses of the impact of patch isolation and pollution from multiple sources on community structure and functioning. Sampling methods included terrestrial pitfall traps, sweep nets, beat sheets, vacuum sampling, and newly designed floating pitfall traps. All specimens were counted and identified to the family level. This represents the first widespread sampling of arthropod biodiversity performed in the South Shore Estuary and will provide a basis for future studies on the passage of heavy metal pollutants through invertebrate food webs and the use of predacious arthropod as indicator species to gauge the health of marshland ecosystems.

Nursing

Nursing Undergraduate Poster Presentations

Name: Maria Antigua, Elena Ortiz, & Richard Lombardi

Title: Interventions to Improve Management of Type 2 Diabetes among Adults

Faculty Advisor: Dr. Yiyuan Sun, assistant professor of nursing

Abstract: According to the Center for Disease Control and Prevention, among U.S. residents aged 65 years and older, over 9 million had type 2 diabetes in 2010. Physical activity and exercise, in addition to diet and medications, have been considered as an important measure in the treatment of diabetes. However, the effect of exercise dose (including type of activity, frequency, duration and intensity) on diabetic outcomes has not been consistently observed among adults. Nurses are on the front line to educate patients on the benefits of physical and improved diabetic control. The purpose of this randomized clinical trial is to investigate the relationship between high intensity and low intensity exercise (with different frequency, duration and intensity) and biomedical outcomes (fasting blood glucose, glycosylated hemoglobin, VO₂max, energy expenditure, insulin sensitivity). Men and women 18 and older with type 2 diabetes will be included in the study if they currently do not engage in a regular exercise program and have no contradictions of walking. Participants will be randomized into the high intensity, low intensity and regular care. Findings of this study will improve diabetic control and patients quality of life.

Name: Christina Asphall

Title: What is the relationship between a Registered Nurse's biases to race, religion, and gender and the patient's perception of the level of care provided? A quantitative study.

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: The focus of this research study is the, always complex, nurse-patient relationship and to understand if the nurse's biases negatively impact the patients' perception of the level of care provided; as well as the overall level of care. To address this relationship I will be proposing a quantitative study that asks: "What is the relationship between a Registered Nurse's biases to race, religion, and gender and the patient's perception of the level of care provided?" This topic is particularly important because, as a future nurse, it is essential to have a clear understanding of how my own behavior can impact a client. In terms of demographics the study would include clients on a Medical Surgical unit between thirty and fifty years old. The clients in this age group tend to be more vocal about and involved in their care; making them a great source of information for the study. It would be preferable if the participating clients could be of any gender, religion, or ethnic background because this provides a wide range of possible biases. The participating nurses should have a minimum of 5 years of experience working with patients; so they will likely have a functional knowledge of nurse-patient relationship.

Name: Erica Conde, Alexandra Farrell, Janell Bulgar, Danielle Pascullo, & Minye Niu

Title: Do Elevated Stress Levels in Registered Nurses Affect the Quality of Patient Care?

Faculty Advisor: Dr. Janet Raman, assistant professor of nursing

Abstract: Background and Research Objective: This study used Lazarus and Folkman's Stress Model theory to assess whether high levels of stress in Registered Nurses (RNs) did or did not affect the quality of their patient care. The significance of this study stems from the idea that management of stress in RNs may improve patient care outcomes in hospitals. Subjects and Methods: The convenience sample used consisted of RNs on a medical surgical floor in a large municipal hospital in Nassau County. All questionnaires used in the study were administered to the nurses and their corresponding patients during change of shift. The quantitative study used a one-day cross sectional design and consent was acquired from both nurses and patients.

Name: Albina Ganieva & Isabel Khaimov

Title: A Smoking Cessation Program for Pregnant Women

Faculty Advisor: Dr. Yiyuan Sun, assistant professor of nursing

Abstract: A Smoking Cessation Program for Pregnant Women

Maternal prenatal smoking is a public health concern. Many women stop smoking when they become pregnant, but around 11% continue. This is a public health problem, because maternal prenatal smoking can lead to several poor pregnancy outcomes, including premature rupture of the membranes, preterm birth, low birth weight, placenta previa, and placental abruption. In addition, exposure to second-hand smoke after birth can increase an infant's risk for respiratory tract infections, ear infections, and Sudden Infant Death. Although recent health care reform extends prenatal smoking cessation intervention coverage to all pregnant women on Medicaid, many health care practitioners are not equipped to deliver effective smoking cessation interventions. In addition, relapse rates in the postpartum period for both the insured and the uninsured are high. In this proposed study, the effectiveness of a smoking cessation program extended to postpartum period will be tested among pregnant women who smoked during their previous pregnancies and gave birth to healthy babies. Pregnant women who have no intention to quit during their pregnancy will be recruited from community and randomized into either a control or an intervention group. Participants in the intervention group will receive cognitive-behavioral intervention during pregnancy and in the first year postpartum. Knowledge, beliefs, and attitude toward smoking, barriers for quitting smoking, and smoking behaviors will be assessed at pre- and post-intervention. Findings from this study will identify successful strategies to help pregnant women quit smoking during pregnancy and through the challenging postpartum period when stress is high.

Name: Sara Londono, Stephanie Solares, Kaitlin Elias, & Natasha Copelin

Title: How to improve hand hygiene to decrease hospital acquired infections among the elderly

Faculty Advisor: Dr. Yiyuan Sun, assistant professor of nursing

Abstract: Elderly patients have weak immune systems and are at high risk for hospital acquired infections. Hand hygiene is an effective measure to reduce hospital acquired infections. However, hand hygiene adherence among health care providers remains low. This study will test an innovative strategy to promote hand hygiene adherence among health care providers in a long term care facility. Cluster sampling and randomization will be used to assign units to either a control or intervention group. Knowledge and attitude toward hand hygiene, hand hygiene compliance rate, and incidence rates of hospital related infection will be measured. Findings from this study will contribute to quality improvement and assurance of nursing care and decrease health care cost in long term facilities.

Name: Amelia Moodie & Rachel Telfer

Title: How to accurately assess pain among substance abusers?

Faculty Advisor: Dr. Yiyuan Sun, assistant professor of nursing

Abstract: Pain relief is a basic human right but individuals with substance use disorders (or history of substance abuse, depends on which population you are interested in) are more often under treated for their chronic pain. Under-assessment and the discrepancy between patient self-reported and nurse rated pain levels is one of the reasons for the under-treated pain among people with substance abuse disorders. The purpose of this study is to identify an accurate tool to assess chronic pain (headache, or arthritis related chronic pain, etc) among individuals with substance abuse disorder. Accurate, ongoing pain assessment is the premise for effective pain management. Nurses as patients' advocate in pain assessment could be challenging because our attitudes, feelings and beliefs affect our appraisal for pain. Other factors such as patient psycho-social and functional factors also confound nurses' assessment of pain among individuals with substance abuse.

Social Sciences: Psychology

Psychology Undergraduate Poster Presentations

Name: Jennifer Bacchus, Justine Ann Batilo, Tania Bates, Victoria Gonsalves, Stephanie Kelly, Elizabeth Kemp, Ria KouKoulis, Gracemarie Louis, Gregory Mallia, Lucas Mietlowski, Karen Moss, Sean Safferson, & Kristina Zivkovic

Title: Ongoing Research Projects in 'Practicum in Experimental Psychology'

Faculty Advisor: Dr. Susan Petry, professor of psychology

Abstract: Presented in this poster are short descriptions of research being done by students in the psychology class Practicum in Experimental Psychology. This semester the students are working on several research projects including learning style and change blindness; seeing personality in student's lecture doodles; conceptions of the self and emotions in 8 and 12-year-olds drawings; value structures in competitive and non-competitive dancers. Other projects include: the relation between empathy and fear with respect to amygdala function; mature- and baby-facedness influencing trustworthiness and sociability; emotional reactions to messages in different type-fonts. Additional projects include: memory of appearance details in men and women; FB use promoting or undermining relationships; 'mean girls' and control issues; and physical vs. mental exercise as primary contribution of fitness in the elderly.

Name: Jessica Buthmann

Title: Breaking Up is Hard to Do: Attachment Style Moderates the Association between Relationship Status Change and Mental Health

Faculty Advisor: Dr. Katherine Fiori, assistant professor of psychology

Abstract: College students make foolish and even dangerous choices, such as drinking to excess and smoking, all too frequently (Bailey, Haggerty, White, & Catalano, 2011). This population is also prone to developing depressive symptoms (Swanhol, Vosvick, & Chng, 2009). The present study seeks to identify the association of relationship status changes on risky decision-making, specifically changes in engagement in behaviors including substance abuse, having multiple sexual partners, and inconsistent contraception use. The study also explores changes in participants' depressive symptoms, which the literature suggests often accompanies risky behaviors (Braithwaite, Delevi, & Fincham, 2010; Swanholm et al., 2009). We examine the possible moderating effects of attachment style on associations between relationship status changes and changes in risk-taking and depressive symptoms, since attachment styles are believed to have a strong influence on interpersonal behavior in particular (Mikulincer & Shaver, 2007). Data from 112 first year college students yielded significant interactions indicating that both anxious and avoidant attachment styles can exacerbate problems associated with the termination of relationships. Participants who came out of a romantic relationship scored higher on depressive symptoms and consumed more alcoholic beverages than all other participants. But among these participants, scoring highly for either attachment anxiety or avoidance was associated with even greater depressive symptoms. In addition, those who scored highly on attachment anxiety and experienced a relationship termination consumed significantly more alcoholic beverages than all other participants. These findings indicate that changes in relationship status affect people differently depending on attachment style, leading to different coping strategies.

Name: Joseph Diaz

Title: Self-Esteem as a Moderator of the Relationship Between Levels of Negative Social Exchange and Presence of Disabilities in a College Freshman Sample

Faculty Advisor: Professor Valentina Stoycheva

Abstract: The following study will examine the association between the presence of disabilities in incoming college freshman and negative social exchanges, as well as the possible moderating effect of self-esteem. Incoming freshman are bound to experience negative, as well as positive, social exchanges as they develop social groups and experiment with making new friends. The following research examines the first wave of participants in the Changes in Social Network Across the Transition to College study, which was conducted by Dr. Katherine Fiori at Adelphi University, and which surveyed incoming college freshman (n=305). Research shows that there is a relationship between high levels of negative social exchanges and more health conditions (Newsom, Mahan, Rock & Krause, 2008). Therefore, in the present study it was hypothesized that incoming freshman with disabilities will experience negative social exchanges at a higher rate than incoming freshman without disabilities. It is further hypothesized that this association will be moderated by the participants' level of self-esteem. Incoming freshman with disabilities who have high levels of self-esteem are expected to report fewer instances of negative social exchanges compared to incoming freshman with disabilities who have low levels of self-esteem. Implications and future research will also be discussed.

Name: Crista Gallo

Title: Brief Subliminal Exposure to Feared Stimulus Promoting Approach in Spider Phobic Individuals

Faculty Advisor: Dr. Joel Weinberger, professor of psychology

Abstract: In order to diminish phobias, theorists have suggested that phobic individuals be aware of their exposure to the anxiety-provoking stimuli. Recent research however has indicated that conscious cognitions do not have to be explicitly challenged in order to elicit behavioral change in exposure therapy. These studies have shown that brief exposure to unreportable, subliminal images of spiders decreased avoidance of a tarantula (e.g., Weinberger, Siegel, Siefert, & Drwal, 2011). If unconscious exposure could eliminate and or reduce the unpleasant effects that traditional exposure therapy often results in, a more efficient alternative treatment could be developed. In the present study, we examined whether subliminal images of another feared stimulus, a snake, would evoke the same reduced avoidance toward a different feared object, a tarantula. We hypothesized that images of the snake would not elicit the same approach. Participants who identified themselves as fearful of spiders were randomly assigned to one of three subliminal conditions: computer-generated images of spiders, snakes, or landscapes. They engaged in a Behavioral Approach Task (BAT) with a live tarantula and then completed a computer discrimination task to assure they had no conscious perception of the subliminally-presented stimulus. To examine the results of the BAT task, an Analysis of Variance (ANOVA) was performed. The results indicate that presenting images of snakes do not induce the same effects that result from exposure to images of spiders. To obtain statistically significant $p < .05$, a greater sample size is needed, thus further data collection is warranted and is currently underway.

Name: Brooke Jonas

Title: Current Perception of Tattoos in the United States

Faculty Advisor: Dr. Carolyn Springer, associate professor of psychology

Abstract: Despite the influx of individuals in the United States who have tattoos, it is believed that there still remains a stigma attached to those who mark their skin. The effort put forward in this survey study investigates the perceptions and possible stigmas that people in the United States have towards the inscribed, or tattooed, body. This survey investigates the impact of socio-demographic variables such as gender, age and religion. It is believed that various traits play a role in individual's perceptions on tattoos and tattoo acceptance. This study is designed to gain a greater understanding of the possible stigmatization and overall perceptions of tattoos in modern society and how individuals with and without tattoos perceive them.

Name: Cassandra Papandrew

Title: Interhemispheric connectivity and subthreshold autism traits in healthy adults

Faculty Advisor: Dr. Lars Ross, assistant professor of psychology

Abstract: The notion that symptoms associated with Autism Spectrum Disorder (ASD) are the severe extreme of traits otherwise continuously distributed in the general population is gaining increasing popularity (Constantino & Todd, 2003). This is reflected in new efforts to quantify so called "Subthreshold Autism Traits" in the general population (Kanne et al., 2012). Extensive research efforts have been made to associate behavior observed in autistic individuals with neurophysiological abnormalities. A leading neurobiological theory of ASD pathogenesis suggests altered brain connectivity as a neural signature of the disorder. Findings supporting this notion are structural white matter abnormalities (reduced fractional anisotropy (FA) and reduced size of the corpus callosum, indicating impaired inter-hemispheric connectivity (e.g. Alexander et al., 2007). The present study explores possible links between self-reported autism traits as assessed by the Subthreshold Autism Trait Questionnaire (SATQ) (Kanne et al., 2012) and measures of FA in the corpus callosum, assessed by diffusion tensor imaging (DTI), in a cohort of healthy adults. It was hypothesized that lower measures of FA will be correlated with more self-reported autistic traits. In twenty-two neurotypical individuals, we found a significant negative correlation (Pearson) between average FA in the corpus callosum and SATQ scores ($r = -.569$, $p = 0.006$). This indicates that higher autism traits are associated with decreased structural integrity of the corpus callosum in healthy adults. These findings provide preliminary evidence for an association between inter-hemispheric connectivity and autistic traits in unaffected individuals, and support the notion that autistic traits are continuously distributed in the general population.

Name: Geelita Williams

Title: Exploring Differences in Student Perceptions of Campus Physical and Mental Health Services

Faculty Advisor: Dr. Carolyn Springer, associate professor of psychology

Abstract: Health services play a critical role in countless communities, which affect public health in a multitude of ways. The staff members, including doctors, nurses, counselors, administrators, as well as the services offered, have a direct impact on the health of individuals which utilize their facilities. In the higher education arena, specifically on college campuses, health services centers have a major responsibility to the community served. There exists a common belief that many young adult students are not concerned about their health, as they perceive themselves insusceptible to ailments in such a thriving stage of life. However, this is not accurate. Students are concerned about their health, do indeed feel susceptible to different aspects of their health, and also desire what health services have to offer (Boehm et al., 1993). Over past decades, research has examined student perceptions toward physical and mental services offered on their respective campuses, however, much of the studies presented were quite specific areas such as of participating students' ethnicity and academic focus, like S. Michael Plaut, and fellow researchers' study of the perception of mental health services for medical students (1993). The present study aims to examine students' perceptions of health services offered on campus, and explores the differences that present themselves across, but are not specific to, students' age, gender, ethnic group, field of study, and year in college. It will also as exploring the role that shyness plays in such perceptions. This study seeks to heighten the understanding of student perceptions of offered physical and mental health services, and provide guidance for improvement.

Psychology Undergraduate Oral Presentations

Name: Ahreum Kim, Jonathan Singer, & Alyssa Conigliaro

Title: “Perceiving” Wisdom and Dependency in Faces: the Buddha Effect and Other Stereotypes

Faculty Advisor: Dr. Susan Petry, professor of psychology

Abstract: The ability to perceive facial expressions is crucial in communication. According to Soto & Levenson (2009), perceiving, interpreting, producing, and responding to emotional signals correctly is advantageous in social settings. There are six universal expressions: happiness, sadness, anger, disgust, fear, and surprise (Ekman, 2003). However, the way that the expressions are perceived differ across cultures (Stanley et al., 2010). There are stereotypes that are present when judging emotion in others (Ambady & Weisbuch, 2011). This study sought to investigate the role of this effect in ethnicity and age as well as stereotypes associated with ethnicity and age. Some common stereotypes that have already been researched are that Caucasians can recognize negative emotions in African American participants more quickly than positive emotion, especially with anger (Ambady & Weisbuch, 2011). Another stereotype found in previous research is that males are perceived angrier than females are (Bijlstra et al., 2010). However, age and its influence on people’s perception has not been explored in depth. In addition, Asian stereotypes have not been explored. The current study focused on the emotions happiness and anger. The dependent variables were dependency and wisdom. Subjects were undergraduate college students. Data analysis showed some stereotype confirmations, although not all. Happy faces were perceived to be wiser and younger. It was also shown that both older and younger participants perceive older stimuli to be wiser. The results of this study will contribute to the literature of perception of facial expressions and the influence of age, culture, and stereotypes. solve my postage stamp project. What came to mind was the Jeep Wrangler.

Name: Ariana Lenox

Title: Short-term Memory of Women with a History of Sexual Abuse

Faculty Advisor: Dr. Kate Szymanski, associate professor of psychology

Abstract: Women with a history of childhood sexual abuse typically show various cognitive disabilities, one of them being deficiencies in long-term memory (Duncan, 2004). Ample research has been done on the long-term memory of sexually abused women, showing that they have difficulty recalling memories of abuse and autobiographical facts (Duncan, 2004). However, there is very little research done on the short-term memory of sexually abused women. Whether women have a deficiency in their ability to retain information in their short-term memory is not clearly known. The goal of this study is to determine whether sexually abused women have a lower capacity in their short-term memory than women without this history. Additionally, this study intends to find whether sexual cues would further disable the cognitive ability of sexually abused women to recall information from their short-term memory. Participants will be asked to read a short, romantic story and then answer 30 questions about the story, which will assess their short-term memory. Upon completion of these tasks, participants will also be given a Dissociative Experiences Scale. We have hypothesized that sexually abused women will perform more poorly on the memory task than women without this history. Additionally, Women with a history of sexual abuse will show the poorest recall of sexually related information. Our last hypothesis is that women with a history of sexual abuse who score high on the Dissociative Experiences Scale (DES) will remember less information from the story than women with a history of sexual abuse who score low on the DES.

Name: Kathleen Matuszewicz

Title: Man's Best Friend: An Analysis of Companion Animals and Attachment Styles

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: A great deal of research has focused on the bonds between humans and their companion animals. Current research examines the positive effects companion animals have on different aspects of human functioning, including an individual's mental and physical well-being (Walsh, 2009; Peacock, Chur-Hansen & Winefield, 2012, Barlow & Cromer, 2012). Several studies focus prominently on the attachment between humans and companion animals, indicating that companion animals serve as sources of love and comfort during times of stress (Barlow & Cromer, 2012; Enders-Slegers, 2000). While current research addresses the benefits of these attachments, it does not delve into whether these strong bonds can moderate insecure attachment styles within human relationships. Bowlby (1974) proposed that a child becomes attached to a primary caregiver through simple interactions that take place at an early age. Although it is a long process, insecure attachment styles can change throughout the course of an individual's life—often after a strong, stable attachment relationship has been formed. The question then arises whether strong attachments between humans and their companion animals have a moderating effect on the individual's insecure attachment style, helping the individual develop secure attachments in later romantic relationships. The present study aims to fill this gap in research. Utilizing grounded theory and both qualitative and quantitative research methods, this study examines the moderating effect attachments between humans and companion animals may have on insecure human attachment. Results from this study will enhance the importance of relationships with companion animals and their effects on human attachment.

Name: Jonathan Singer

Title: The Interplay of Physical and Emotional Dependency in Older Adults

Faculty Advisor: Dr. Katherine Fiori, assistant professor of psychology

Abstract: Individuals vary widely in levels of emotional dependency across the lifespan, whereas physical dependency tends to increase across the lifespan. The present study investigates the interplay of emotional and physical dependency in a sample of older adults (65 and older), and the consequences of this interplay for their well-being. One hundred individuals from three different types of senior centers (day time center, minimum care facility and full time care facility) will be given measures of emotional dependency, physical dependency, and depressive symptoms. Emotional dependency will be assessed with Bornstein and Languard's (2003) Relationship Profile Test, physical dependency will be assessed with Mahoney's Functional Evaluation (1965), and depressive symptoms will be measured with the Beck Depression Inventory. It is hypothesized that high levels of physical dependency in combination with low levels emotional dependency will be associated with higher levels of depressive symptoms than high levels of physical dependency combined with high levels of emotional dependency.

Psychology Graduate Poster Presentations

Name: Marie Barnett

Title: Cancer-Related Self-Disclosure among Adolescent and Young Adult Cancer Survivors

Faculty Advisor: Dr. Francine Conway, chair and associate professor of psychology

Abstract: Majority of individuals diagnosed with cancer as an adolescent or young adult (AYA) will become long-term survivors. These survivors face psychosocial sequelae and late effects that interact with normative development and the integration of their cancer experience into relationships posttreatment. Self-disclosure (SD), the sharing of thoughts, feelings, and experiences, is a hallmark of AYAs' relationships. Additionally, social support has been identified as a salient need for AYAs survivors. This study utilized mixed methods to investigate cancer-related SD, and its role in the relationship between social support and posttraumatic growth (PTG). Part of a larger study, qualitative analyses were conducted using individual interviews to describe cancer-related SD (n=26; 62% female; M age=19.6; age at diagnosis M=15.6). Most common diagnoses were lymphomas (31%) and leukemias (19%). These analyses informed design of quantitative SD measures administered in a survey among AYA survivors (n=150; 41% female; M age=21.3; age at diagnosis M =16.8). Most common diagnoses were lymphomas (34%) and sarcomas (25%). Inductive thematic content analysis (Inter-rater reliability>80%) revealed three themes and eight subthemes of SD: decision making (don't ask/don't tell, shared experience, relationship potential), views of others' response (perceived apprehension, neutral/positive responses), and methods of disclosure (verbal, written, behavioral). No significant gender differences emerged. Survey data examines the relationship between cancer-related SD, perceived social support, and PTG. Analyses controlled for gender, treatment type, and age at diagnosis. As one of the first studies to investigate this relationship, results target ways SD can be used to promote growth and facilitate relationships for survivors.

Name: Kristen Capps & Anthony Mullen

Title: Relationship Between In-Session Patient Crying Behavior, Therapeutic Interventions, and Patient Characteristics

Faculty Advisor: Dr. Katherine Fiori, assistant professor of psychology

Abstract: The present study will provide analysis of context during patient crying behavior in psychotherapy and related patient characteristics. The aim is to further the understanding of the relation of crying behavior in therapy with patient characteristics and therapeutic interventions. Assessment feedback sessions for 52 patients beginning psychotherapy at a university-based clinic were coded for discrete crying segments. The therapist's intervention prior to and immediately after the crying episode were recorded verbatim and independently rated using the Comparative Psychotherapy Process Scale (CPPS; Hilsenroth et al., 2005). Inter-rater reliability of the CPPS variables used in this study was in the good to excellent range. Analysis indicates that the therapist intervention prior to patient crying most often encouraged the exploration and expression of difficult affect or of the patient's fantasies and wishes. Personality characteristics correlated with crying were also identified. Though only approximately 20 percent of patients cried during the feedback session, those who cried typically did so multiple times. Crying is an accepted and expected occurrence in therapy. Individual variations in crying behaviors likely contribute to patient behavior in therapy, but little work has been done to elucidate the therapist's role in the patient's experience of crying. Our study showed that intervention techniques focused on the patient's emotions and fantasies are the most highly associated with crying, and that patient characteristics can be identified.

Name: Jillian Donaldson

Title: Disgust, Ideal Mate Preferences, and Communication In Relationships

Faculty Advisor: Dr. Lawrence Josephs, professor of psychology

Abstract: Disgust is a fascinating yet scarcely studied topic. Little is known about the psychological effects of this emotion and therefore little can be known about its effects on different aspects of romantic relationships. The present study seeks to explore disgust as a personality trait and its impact on two very important features of romantic relationships: how couples communicate with one another, and whether or not disgust has any influence on the personality traits one prefers in a romantic partner. The study utilizes three different scales to assess these features, including the Three-Domain Disgust Scale (Tybur, Lieberman & Griskevicius 2009), the Communication Patterns Questionnaire (Christensen & Sullaway 1984), and the Ideal Partner Scale (Fletcher, Simpson, Thomas & Giles 1999).

Name: Marina Goldenberg, Phillip Tenenbaum, & Israa Nasir

Title: Interrelationships among Beliefs about Yoga, Mindfulness, Self-Compassion, and Stress

Faculty Advisor: Dr. Morten Kissen, professor of psychology

Abstract: This study will examine the interrelationships among beliefs about yoga, mindfulness, self-compassion and stress. Using a cross-sectional, correlational design, information will be gathered using a battery of self-report questionnaires consisting of the Beliefs About Yoga Scale (BAYS), Five-Facet Mindfulness Questionnaire (FFMQ), Self-Compassion Scale (SCS), and Cohen's Stress Inventory (CSI) to measure each of the investigational constructs. Subjects will be adult college students recruited from Adelphi University. The purpose of this study is to add to the field of yoga and mindfulness research within psychology, as well as to potentially identify predictors of positive attitudes toward yoga. This study also hopes to explicate further avenues of research within this field. The anticipated result is that exposure to, and experience with, yoga will be positively correlated with increased mindfulness and self-compassion and lower levels of stress.

Name: Melissa Goldstein & Maria Ringle

Title: Low Versus High Functioning Adolescents With ASDs: A Comparative Study

Faculty Advisor: Dr. Ionis Sapountzis, director and associate professor of psychology

Abstract: Presenters will review differences between low functioning and high functioning adolescents with an Autism Spectrum Diagnosis (ASD). Current practices will be presented along with strategies that were implemented to address the social and emotional demands of the participants during their yearlong participation in weekly social skills/psychotherapy groups. Research about level of participation, anxiety, social stress, and overall self-esteem throughout high school will be discussed. Participants will learn how to effectively implement groups into school settings.

Name: Sarah Jofen-Miller

Title: Race Differences in Division of Labor and Gender Ideology in Early and Late Transitioners to Parenthood

Faculty Advisor: Dr. Katherine Fiori, assistant professor of psychology

Abstract: Research indicates that early transition to parenthood for couples is associated with more traditional gender ideology as well as division of household labor and childcare that is split along traditional gendered lines (Helms-Erikson, 2001). The purpose of this research was to examine race differences in the associations between parenthood transition timing and equality norms, division of household labor, and likelihood of divorce in couples followed over time. The present study utilizes data from the Early Years of Marriage (EYM) project that follows a representative sample of urban black and white couples over a period of sixteen years. A subset of the data (N = 102 couples) was used to run a repeated-measures MANOVA looking at the change over time in division of labor and equality variables for early versus late transitioners separately by race. We found trends in the expected directions, with early transitioners being more traditional on both variables than late transitioners overall, as well as trends towards interesting race differences. We conducted a Chi-square analysis to examine the effects of timing of parenthood transition and likelihood of divorce in a dataset including the divorced couples (total N = 134 couples). This analysis indicated that for both black and white couples, having children very early on in the marriage significantly predicted divorce by Year 4. Results suggest that for both black and white couples, early transition to parenthood is associated with a more traditional outlook and division of labor, and in addition increases the likelihood of early divorce.

Name: Maria Pesantez

Title: The Effects Of Losing An Older Sibling vs. Losing A Parent

Faculty Advisor: Dr. Rebecca Curtis, professor of psychology

Abstract: We have all, or at least most of us, experienced the loss of a loved one, such as a parent or a sibling. Although we understand the concept of loss and grief, there have not been many studies done comparing the loss of an older sibling with the loss of a parent. The literature describes studies done to gain a deeper understanding of these two types of losses as they stand alone but very minimal attention has been placed on the comparison of the effects brought on by the loss of a parent vs. the loss of an older sibling. Prior studies have found that during sibling loss, guilt is a persistent emotion throughout the grieving process, especially if there was constant sibling rivalry. On the other hand, studies based on parent loss have shown that adults who have experienced the loss of a parent have a constant awareness of mortality and an increase in alcohol consumption. In this study we will have a total of 40 bereaved individuals whom we will divide into two groups; parent-bereaved individuals and sibling-bereaved individuals. Data will be collected via questionnaires completed by the participants and collected upon completion. The Core Bereavement Items (CBI) will be used to measure participant's general extent of bereavement-induced phenomena. We expect this study to highlight the similarities and difference that exist among the effects brought on by the loss of a parent in comparison to the loss of an older sibling.

Name: Joseph Pilla

Title: Impact of Presentation on Attitudes towards Alcohol

Faculty Advisor: Dr. Carolyn Springer, associate professor of psychology

Abstract: Every year thousands of kids under the age of 21 die due to alcohol related accidents. My study investigates the impact that advertising has on adolescents perceptions of beer and alcohol, and the likelihood of them drinking when they get older. This study compared two groups of adolescents about their attitudes toward beer. In phase one of the study eighty participants (ages 14-17) were randomly placed into two groups: one that saw a colored logo, and one that saw a black and white logo. In phase two of the study an additional eighty participants were shown logos with a statement underneath stating “alcohol companies uses marketing manipulation to try and get you to buy alcohol”. After they viewed the logos participants were given surveys to answer questions about their attitudes towards beer, their attitudes towards drinkers, and their opinion about the pictures. This poster will present the results from both phases of the study.

Psychology Graduate Oral Presentations

Name: Cariann Coward

Title: Juvenile Delinquency: Methods of Motivation

Faculty Advisor: Dr. Laura DeRose, assistant professor of psychology

Abstract: Literature shows that group care style of treatment is one of the most effective styles in treating juvenile delinquent adolescents who have experienced trauma. Studies show that this style of treatment predicts higher rates of favorable discharge and returning home. Adolescents treated with this approach are less likely to be placed in a facility again. Group style treatment also shows positive changes in the behaviors and attitudes of its residents and the chances of being successful in the community is increased. The objective of this study is to assess attitudes of counselors in a juvenile delinquency residence regarding most effective means of motivating the adolescents' residents. The aim is to identify how counselors' attitudes are consistent with theoretical models of motivation in the literature. The many ways staff uses their skills to motivate and encourage the residents in the group care setting will be examined.

Name: Jennifer Ganley

Title: Therapist Self-Disclosure, Client Attachment, and the Real Relationship

Faculty Advisor: Dr. Jairo Fuertes, associate professor of psychology

Abstract: While a great deal of research has been directed at examining the role of the working alliance in psychotherapy, researchers have only recently begun to examine the role of the real relationship in treatment- even though the concept of the real relationship has existed since Anna Freud. In the current study, we examine the role of the real relationship in out-patient psychotherapy treatment, and link the relationship to two related yet distinct concepts in the therapy literature: therapist self-disclosure and client attachment style. Therapist self-disclosure is an intervention that is used infrequently by therapists, yet it has been shown to promote exploration in clients, and to foster perceptions of therapists as real, experienced, and human. Attachment has received a great deal of theoretical and empirical attention for decades, and has been linked with the working alliance, the real relationship, and treatment outcome, among other variables. However, no study that we know of has linked attachment to self-disclosure, or self-disclosure to the real relationship. By bringing these variables together in one study, we propose to generate evidence to answer the three following research questions. First, what is the relationship between therapist self-disclosure and secure and insecure client attachment styles? The second research question is about the real relationship vis-à-vis therapist self-disclosure and client secure and insecure attachment, and whether the real relationship moderates the relationship between these two constructs. The third question examines treatment progress and the extent to which each of these three factors is associated with gains in psychotherapy.

Social Sciences: Social Work

Social Work Graduate Oral Presentations

Name: Azahah Abu Hassan Shaari

Title: Reflections of Group Experiences by Members Recovering from Drug Use: A Case Study from the Drop-In Center (DIC) in Kuantan, Pahang, Malaysia

Faculty Advisor: Dr. Carol Cohen, associate professor of social work

Abstract: Group therapy provides different experiences than individual psychotherapy in helping recovering drug users. According to Khantzian (2001), group psychotherapy is a containing influence that provides “a unique corrective emotional experience” in helping people with addictive disorders. To date, there has been extensive research on groups with recovering drug users, including studies in Europe (Best, Gow, Taylor, Knox, & White, 2011) and the United States (Khantzian, 2001; McVinney & Hamid, 2002; Smock, Trepper, Wetchler, McCollum, Ray, & Pierce, 2008). However, there are no published studies about group interventions for recovering users in Malaysia. This study focuses on how and why members use the DIC group in Kuntan, Pahang to guide them on their journey to recovery. Established in 1998, group work for recovering users at the DIC has become a model for other programs across Malaysia. A case study approach will be used through group interviews with the recovering members and facilitators who participate in group work. DIC Group members report that they have had transformative experiences in working closely with others who have experienced similar events. It appears that over time, this group can offer a sense of commitment and safety to help the recovering process. Recovery from drug use is defined as an 'ongoing process' and not a one-time life event (Best, Gow, Taylor, Knox, & White, 2011). In this case, group experience is important to provide an ongoing, safe place of support for members in reflecting on their recovery journey and process.

Name: Anat Anais Bar

Title: The Experiences of Underserved Minority Battered Women

Faculty Advisor: Dr. Roni Berger, professor of social work

Abstract: This qualitative study was informed by Feminist Standpoints Theory. It explored the experiences of underserved minority battered women and sought to understand how social structures of power and oppression shape these experiences. Previous studies have indicated that minority women are more vulnerable to intimate partner violence, yet less served by existing services for survivors of domestic violence. Despite a vast body of research about violence against women, knowledge about the unique experiences and needs of marginalized women, particularly those who are not served by domestic violence services is limited. This study used in-depth semi-structured interviews to document the experiences of a non-random, convenience sample of seventeen black women who reside in inner city minority communities. All participants experienced physical abuse by at least one intimate partner. Although several of them tried to seek help for the abuse in the past, none was a recipient of domestic violence services at the time of the interviews. The interviews were audio taped, transcribed and content analyzed to identify themes across cases that depict the women's experience of their external environment, their emotional world and their self perception. The three primary findings of this study were the sense of living with constant abuse that characterized the lived experience of the women, the profound loneliness that marked their emotional world and a duality in their self perception of feeling simultaneously unworthy and strong. These findings were discussed in the context of the women's social location at the intersection of the interlocking systems of class, race and gender oppressions. Implications for theory, practice, policy and further research were offered.

Name: Joanna Contreras & Donna Dholakia

Title: High Risk Behaviors and HIV Risk Among Women in Substance Abuse Treatment in New York City

Faculty Advisor: Dr. Subadra Panchanadeswaran, associate professor of social work

Abstract: Past research has documented the linkages between risky sexual behavior and HIV infection in the United States. Researchers have also highlighted the increased vulnerability to HIV in the context of substance use. The goal of the current study is to explore the contextual experiences of negotiating HIV risk among women in substance abuse treatment. A purposive sample of 24 women from an outpatient substance abuse treatment center participated in this qualitative investigation. Data were collected through semi-structured, in-depth interviews. Findings revealed that in addition to respondents' own risky behaviors, intimate relationships posed significant barriers in women's efforts to stay safe. Social support and knowledge about HIV risk were key in enhancing women's abilities to effectively negotiate risk and stay safe. This study underscores the complexity of drug using women's capacities and willingness to actively negotiate HIV risk and suggests significant implications for social work practice in substance abuse treatment settings and for future research.

Name: Marc Liff

Title: A Qualitative Study of the Group Work Experiences of Male to Female Transsexual Individuals

Faculty Advisor: Dr. Carol Cohen, associate professor of social work

Abstract: Transgender clients (specifically male to female transsexual individuals) have been participants in social work and related group work since the 1970's (Dickey and Loewy, 2010). Despite this, the transgender community is still "among the most misunderstood and overlooked groups in our society" (Burdge, 2007, p.244). This is, perhaps, reflected in the virtual absence of published research on group work with the transgender community (Dickey and Loewy, 2010). Burdge (2007) states "Although there is some consensus in the social work literature on best practices with transgendered people, most of these claims are based on anecdotal evidence" (p.248). This study will utilize a narrative approach to capture the "voice" of the participants and narrative analysis to assess the themes and data. Marshall and Rossman (2011) state that "narrative analysis seeks to describe the meaning of experience for those who frequently are socially marginalized and oppressed" (p.22). Utilizing snowball sampling, the respondents will be interviewed one to two times and audiotaped about their experiences in group work. This exploratory, qualitative study will present experiences and themes from five male to female transsexual individuals who have participated in groups. The study reveals positive and negative experiences of group work, elements of group work that can be improved upon based on these experiences, and areas of group work needing further study in relation to this clientele.

Name: Himalaya Rao-Potlapally

Title: Under the Microscope: A View of the Muslim Community Post-9/11

Faculty Advisor: Dr. Wahiba Abu-Ras, assistant professor of social work

Abstract: The September 11, 2001, attacks on the World Trade Center and the Pentagon were-and remain-a defining moment for all Americans, especially Arab and Muslims Americans. These two groups not only experienced the residual effects of a traumatic event, but also the negative consequences that were not reflected within the American mainstream population: increased suspicion, hostility, attacks, and discrimination. As a result, many became more anxious, fearful, and experienced an intense loss of security and feeling of safety. Previous studies indicate that Arab and Muslim Americans' initial reactions to 9/11 included fear, anxiety, disbelief, and emotional numbing. This study examines the relationship between depression and coping strategies (emotion-focused and problem-focused coping) among 350 Arab and Muslim individuals who reside across the United States. A cross-sectional survey was used to collect the data. Standardized measures were used to assess depression (CES-D) and coping strategies. Canonical correlation analysis was conducted to examine the impact of the demographic and coping strategies (Problem-Focused and Emotional-Focused Coping strategies). The results show a significant correlation between coping strategies and aspects of depression behaviors. In other words, participants who used emotion-focused coping strategies were associated with higher depressive affect, higher interpersonal problems, more somatic complains, and lower positive effects. This leads to our findings that the type of coping strategies employed, directly impacts the implications and development of trauma related disorders across individuals and more specifically in Arab and Muslim Americans.

Social Sciences: Other

Social Sciences (Other) Undergraduate Poster Presentations

Name: Allison Adler, Santina Bonsignore, & Danaleah Schoenfuss

Title: Forensic Individualization of a Female Artisan from Ancient Eleutherna

Faculty Advisor: Dr. Anagnostis Agelarakis, chair and professor of anthropology

Abstract: In studies of antiquity, the important roles performed by women have often been overlooked. This research intends to shed further light on this subject through the study of the skeletal remains of a female excavated at the Orthi Petra Burial Ground in Eleutherna, Crete, Greece. Adelphi University's Anthropology Department, in conjunction with the University of Crete, has participated in the study and preservation of the site since 1992. This necropolis, built and used by the Dorians subsequent to the Minoan and Mycenaean periods, contains remains dated to the 9th-6th centuries BC/BCE that have furthered our understanding of the Greek Classical period. Recently, intra-site discoveries of elaborate female burials have elucidated the status of women during this period. An in-situ forensic study of the skeletal remains addressed in this research has identified significant markers of habitual and occupational stress (MHOS) that suggest this female was engaged in constant physical activity resembling that carried out by a ceramicist. Using this analysis in combination with studies of contemporary and ancient ceramicists in the area, this research intends to provide evidence that this female was indeed a ceramicist. A female ceramicist would have been a rarity in Ancient Greece, as male artisans created the vast majority of ceramics. This research thus presents rare insight into the roles performed by Ancient Greek women and is of interest to forensic anthropologists and archaeologists, as well as scholars specializing in the study of gender roles and ancient civilizations.

Name: Rachel Becker

Title: The Immigration of Eastern European Jews, 1880-1920: A Focus on Russia, Poland, Austria, and Hungary

Faculty Advisor: Dr. Salvatore Primeggia, professor of anthropology & sociology

Abstract: My research looks at the mass immigration of Eastern European Jews between the years of 1880 and 1920. The countries that I focused on were Russia, Russia controlled Poland, and Austria-Hungary. The first part of my research described the histories of each country during this time period. The presence of anti-semitism affected how the Jews were treated in areas including, but not limited to, the government, various occupations, and education. I then looked at the numbers of Jewish immigrants coming to the United States from these countries. Subgroups of Jewish immigrants were analyzed, and factors such as age and sex were studied. This information gave a good insight into who was immigrating and why. After examining all of this information, I analyzed the causes and reasons behind the massive Jewish immigration from Eastern Europe from a sociological perspective.

Name: Cally Benison

Title: How do you define elements of crime in an ever changing society?

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: As a society, we think that crime is something that can be easily defined and attributed to certain factors. The main flaw with this thinking is that society is ever changing. Violence today is attributed to various 'causes' and can include video games, movies, etc, while the real reasons may go unnoticed. Furthermore, how does this explain violent crime in a time before such technology? We need to look more at the individual, any possible psychological and social factors, and work from there. Once this is established, we can also examine crime from an international aspect as well. We can learn not only why certain crimes may happen, but also their trends in other countries. One possible explanation as to why we believe that violent crime is on the rise is that the media might report it in a way that would exaggerate the details. That's one theory. What we need to do is stop automatically trying to place blame, so that we can deduce the true reasons as to why certain crimes occur. Only then can we understand the nature and extent of crime.

Name: Lauren Ciuffo

Title: Understanding Current Trends in American Muslim Divorce and Resiliency

Faculty Advisor:

Abstract: Current trends and common characteristics are explored in American Muslim women who are seeking a divorce. Findings have revealed that Muslim females choose to pursue a divorce at a higher rate than their male counterparts. Possible antecedents of dissatisfaction within a marriage include failure to adapt Islamic culture and values to a Western secular state. The relationship between resiliency and high expectations within the Muslim community are discussed; as are Islamic family traditions and established gender roles and authority that are strongly considered before deciding to divorce. When moving forward, another contributing factor that may impact resiliency and spiritual outcomes are deciphering between the nikah and legal marriage contracts. Resiliency is dependent on overcoming variables such as guilt and shame, stigmatization, family and community pressures, and religious conflicts. Recent divorce rates among the Muslim community have been steadily increasing in frequency.

Name: Kathryn Coyle

Title: Ecotourism in Costa Rica

Faculty Advisor: Mr. Peter DeBartolo, levermore global scholars

Abstract: Ecotourism is a flourishing practice that provides travelers the opportunity to experience a whole new setting while also uniting the interests of environmentalists and developers. More specifically, ecotourism is a form of tourism that fosters environmental understanding, appreciation, and conservation of natural areas and sustains the culture and well being of communities. Costa Rica is the leading expert in sustainable travel. However, environmentalists and economists debate whether the practice of ecotourism is in fact environmentally friendly and sustainable for the economy. The aim of this research is to examine and discuss the benefits and implications of ecotourism in Costa Rica, and to demonstrate how the advantages of ecotourism in this country outweigh the disadvantages. To demonstrate this, my research will include a comparative analysis of three eco-friendly sites that cater especially to tourists. Each of these uses a very different strategy and model within the field of ecotourism. The first is the Irazu Volcano National Park which is funded and maintained by the Costa Rican government. The second is Rancho Mastatal, a non-profit sustainable learning center located in the rainforest. Finally, the third is the Doka Coffee Estate, a family run business centered around sustainable profit. Ecotourism is an expanding field that requires further research. More analysis on the practice of ecotourism will help determine whether other poor Central American nations could also prosper from ecotourism.

Name: Kimberly Lombardi & Desiree Mitchell

Title: Forensic Individualization of an Ancient Wounded Disabled Warrior

Faculty Advisor: Dr. Anagnostis Agelarakis, chair and professor of anthropology

Abstract: This project, part of a larger interdisciplinary archaeo-anthropological endeavor, investigates historical aspects and warfare that prevailed in Eastern Macedonia during the 4th century BC/BCE. During this era, Philip II waged war campaigns to solidify and expand his territorial/political domain, becoming King of Macedon in 359 BC/BCE. Adelphi University's Department of Anthropology, in collaboration with the Greek Archaeological Service, has been studying the demographic dynamics of human skeletal collections representing the war dead of that period. One of those fallen warriors, excavated archaeologically in 1990 from the site of Mesochorion in the prefecture of Serres-Greece, preserved a unique traumatic manifestation acquired in battle long before his death. The wound had been caused by a bronze arrowhead that had penetrated into the intramedullary diaphyseal area of the left ulna (a forearm bone). Forensic and palaeopathological research have indicated that post-traumatic surgical intervention was unable to remove the entire bronze tip of the arrow. This had caused significant focal osteoblastic responses, resulting in a forearm rotatory disability. Nevertheless, medical treatments of healing regimens had deterred the initiation of in vivo wound festering. While the means of medical intervention and the highly suspected effect of intra vitam heavy metal corporeal poisoning are discussed, medical and forensic reconstructive illustrations present facial individualization characteristics of the warrior, and the anatomic changes that occurred at the locus of the wounded forearm. This presentation is of interest to scholars working in the domains of Forensic Anthropology/Illustration, Archaeology, and History, as well as Veterans and Active Service Military.

Name: Edwin Maldonado

Title: The Changing face of the U.S Military: Drones and their implication on the International stage.

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: Under the Obama administration, the U.S military has adopted Drones (unmanned aerial combat vehicles) as a primary means of carrying out high precision aerial strikes on various targets across the world. Never before has the United States utilized such a high volume of Drone strikes as under the Obama administration. This lends itself in part to a changing strategy and modified focus of military involvement for the U.S in its operations abroad. Drones have become a center stage issue in the international arena in regards to the legal and ethical issues that are raised by their constant use. Furthermore, Drone strikes have raised international concerns as their precision (or lack thereof) have challenged the tenets of the Geneva Convention and international laws of war.

Name: Valeria Mendoza

Title: Exploring the Role of Music in the Transnational Lives of Migrants from Mexico in the United States

Faculty Advisor: Dr. Hanna Kim, assistant professor of anthropology

Abstract: In this qualitative study you will see how music takes root in the lives of five Mexican individuals, four males and one female residing in New York. I chose my subjects on the basis that they were all migrants, and had some connection to Mexican music. Because music is a two way channel, those who create it and those that listen to it I selected three professional performers and two avid music listeners. Today migrants are finding loopholes in the contemporary understanding of time and space. In my research study I interviewed five Mexican immigrants who all seemed to agree that although technology was the medium by which they remained connectados or connected to their distant family members in Mexico, it was music that made them feel menos alejados or less distant because they were able to immerse themselves in a current culture trend and social context without having to literally travel. This idea erodes the notion that a nation is defined by a group of people with shared sense of culture, history, and language within definitive political borders because migrants today are able to disregard borders and create a transnational community that celebrates the culture, history and language of Mexico through music far beyond the recognized borders of the nation state of Mexico.

Name: Desiree Mitchell

Title: The Dental Trait of Carabelli

Faculty Advisor: Dr. Anagnostis Agelarakis, chair and professor of anthropology

Abstract: This presentation reflects on the findings of a forensic dentistry research project studying causality and morphologic variability of the non-metric dental epigenetic trait of Carabelli, aiming to elucidate aspects of a nearly 3000 year old riddle: the human condition and perimortem circumstances of four Priestesses. Georg von Carabelli first discovered this trait in the middle of the 19th century describing a fifth cuspal formation on the mesio-palatal surface of maxillary molars, designating it as a genetically linked manifestation; conditions that have been verified through subsequent studies. Based on the archaeo-anthropological record retrieved from the Iron Age (9th-7thc BC/BCE) site of Eleutherna in Crete-Greece, the Carabelli trait appeared with a 100% observation ratio among four female individuals of variable age cohorts (between 13.5-72 years old), buried during a conterminous funerary event in monumental Building "M" of the Eleuthernal burial ground. The unique prevalence of the Carabelli trait among the four females provides evidentiary data in support of genetic relatedness, without omitting the significance of environmental parameters. Through careful analysis of the prevalence and morphological expression of the Carabelli trait among the dental record of a larger sample of coeval female individuals from Eleutherna it appears that population genetic dynamics, influenced by a relative lack of gene flow, point to a rather endogamous matrilineal environment during the "Dark Ages" in Greece. The forensic anthropological data seem to be supported by the material culture of the archaeological record. This presentation is of interest to scholars in Physical/Forensic Anthropology, Population Genetics, Archaeology, and History.

Name: Ryan Puglia

Title: Difference in salaries in upper management of companies in United States versus another country.

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: This research will consist of comparison of salaries of top management in the United States, China and Japan. The focus will be on top management salaries in one corporation, McDonald's, in these three countries. Some factors that will be included in this research is the cost of living in these countries, while also trying to find fairness (through revenue sharing) and equitable practice in the salaries these individuals are receiving. The goal of this research project is to have the reader make an informed opinion on whether they believe that the top management of McDonald's within these countries are receiving reasonable salaries compared to their colleagues. The data for this research will be extracted from public sources of large corporations, such as McDonald's, on the internet.

Name: Michelle Raider

Title: The Relationship between Feminism and the Anti-Human Trafficking Effort

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: This research explores how feminism, particularly the feminist theory of human rights, works, both on its own and in coincidence, with NGOs in this area of work in order to alleviate human trafficking violations on the international level. Aside from analyzing in depth research on the topic, I will be adjoining this research with previous research and interviews conducted on the topic on the relationship between non-profits and gender to further analyze the relationship. Additionally, I am looking to draw research from new interviews conducted with the Vice President of Health Services at Planned Parenthood of Nassau County.

Name: Erin M. Taub

Title: University Community Service and Prevention of Human Trafficking

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: Human trafficking is the recruitment, transportation, transfer, harboring, or receipt of persons by means of threat or use of force. It is giving or receiving payments to receive the consent of a person having control over another person for the purpose of exploitation. The Problematic, or hidden agenda, is the larger framework of the issue. In this case, it is patriarchy. There are three subtopics Manifestations and components: Issues of security and sexual violence, Topical focus: Militarization and sexual violence, and Entry issue: Sexual slavery and trafficking. Patriarchy today is a hierarchy that classifies everyone. It says that some people are more deserving than all other people. Patriarchy manifests itself in society today. There are many root causes other than patriarchy like the convergence of widespread poverty, Demand for cheap labor, Gender discrimination, Economical and social underdevelopment, and Economic and social conflicts. According to research, children who are homeless are more easily trafficked due to the fact that they are virtually untraceable, they may be in the country illegally, or not under parental supervision. I hope to have a much more active role in reshaping students' viewpoints when it comes to gender roles in society. I would like to come up with a framework by which to teach students at Hempstead High School about different ways to view the way women and men are "supposed to act". By targeting young men, in particular, we can teach them to use their strength for good, and to respect women's rights and their own masculinity.

Social Sciences (Other) Undergraduate Oral Presentations

Name: Sinclair Cushmore

Title: Religious Practice Among College Aged Students

Faculty Advisor: Dr. Hanna Kim, assistant professor of anthropology

Abstract: Adelphi University is a secular institution of higher learning that hosts six religious groups. The students who participate in these groups form a minority of the student population, and such students may be faced with decisions on how to negotiate their religious behavior in a secular environment. I have chosen three groups to observe: Newman Club, Muslim Students Association, and Sikhs United. For my fieldwork I have interviewed some members about their religious practices, asking whether their religious practices are affected by the secular environment at Adelphi, and looking at the importance the religious club to which they belong has in their practice. Based on their responses, my observations, and my research in the anthropology of religion, I am trying to understand any common elements in the religious practices of the Catholic, Muslim, and Sikh students, including their outreach efforts. Such outreach efforts, which announce the goals and activities of each religious group to the campus community and invite new members into the group, are interesting to consider since the students in these groups are a minority on campus. What motivates such outreach efforts, and are they successful?

Name: Abigail Paulion

Title: Hebrew Israelites in Brooklyn

Faculty Advisor: Dr. Hanna Kim, assistant professor of anthropology

Abstract: This short ethnography is based on two Israelite communities in Brooklyn, NY who practice a form of Judaism but don't consider themselves as such. Throughout my research I established rapport with two informants from two different temples: Beth Shalom Hebrew Congregation and B'Nai Adath Kol Beth Yisroel. The research shows a typical day as an Israelite and their experiences growing up as an Israelite. I was able to question the informants to describe the way in which they separate law with tradition and how much of being an Israelite is cultural and how much of it is based on law. With this distinction the paper goes on to explore why these Brooklyn Israelites are different from Judaism and whether or not African Americans can be considered Israelites with no relation to those in Israel. This study suggests that religion or way of life for Israelites is what keeps them as a closely knit community. It also suggests that religious identity is directly tied with rituals, practices, and belief in a common law.

Name: Aleksandra Pinkhasova

Title: The Future of Campaign Finance Reform

Faculty Advisor: Dr. Traci Levy, chair and associate professor of political science

Abstract: In light of the ever-growing amount of money used in campaign finance resulting from the U.S. Supreme Court's decision in *Citizens United v. Federal Election Commission*, what is and what should be the future of campaign finance reform? This presentation is an analysis of the campaign finance laws of the United States historically and leading up to present day. What are the origins of campaign finance reform? One can trace them to such basic issues as liberty and equality. Those who favor equality support the limiting of campaign contributions and election spending as failure to do so leads to an unfair ability to influence election outcomes and political access to those of means. Those favoring liberty view campaign spending as a form of speech and part of the necessities of campaigns and civic involvement. This presentation traces the prior legislation in this area starting with 1971 and 1974 Federal Election Campaign Acts and the Bipartisan Campaign Reform Act of 2002 to a discussion of Political Action Committees and "Soft Money". Included in the discussion are illustrative examples of what occurs when effective campaign finance controls are not in place, such as in the Enron scandal of 2001. My analysis of the progress of campaign finance laws utilizes the methodology of how an idea or issue is transformed into a bill and later a law as laid out in John Kingdon's book: "Agendas, Alternatives, and Public Policies".

Name: Elizabeth Taras

Title: Agenda Setting of H.R. 3644- The Private Mortgage Market Investment Act, The Closed Policy Window.

Faculty Advisor: Dr. Regina Axelrod, chair and professor of political science

Abstract: In 2011, a comprehensive GSE reform draft bill emerged in Congress, introduced by Congressman Scott Garrett (R-NJ). H.R. 3644- The Private Mortgage Market Investment Act emphasizes transparency within the mortgage market as the most vital element in reviving the current housing market, and more importantly in keeping the market stable well into the future. The bill's goals are to ensure robust investment without causing a burden on taxpayers and to ensure the rule of law in the mortgage-backed security system. H.R. 3644 also includes provisions to repeal certain outcomes of the Dodd-Frank Act (P.L 111-203), which is arguably the most controversial portion of the bill for the House Democrats. This bill brings to the fore the many issues that may be faced in attempting to pass even some of the most bipartisan legislation.

By using John Kingdon's agenda setting model, this paper focuses on the Problem, Political, and Policy Streams in proposing legislation. According to Kingdon, when these three streams meet it creates a "policy window" that allows legislation to be pushed forward in Congress. When applying Kingdon's model to H.R. 3644, it is evident that this bill does not meet the requirements Kingdon sets forth. While the financial crisis serves as a catalyst for the Problem Stream, the Political Stream and Policy Streams simply are lacking the variables to create this "policy window". Ultimately, the findings show that in order for this legislation to have any momentum, there needs to be a change in administration.

Name: Adrish Tewarie

Title: The Influence of Artists on the Population of the World

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: the influence that artists with the status of a Michael Jackson exercise on the population of the world is tremendous. Sometimes, the population is more apt to listen to the opinion of an artist than a politician. The focus of my study will be to investigate what makes an artist influential: is it just the status and the music, or does it also have to do with the philanthropic work of an artist, as well as their own behavior as normal individuals? Why are these artists influential, and how do they deal with being influential; Do they aim to unite the world with their power, or do they use their power to benefit and progress commercially? With the status that the artist has, does it ensure that any music they release will be adored, or do people still look for a certain standard? Could their career be on a decline after 3-4 songs? What does the artist do with the political power it has? ? the breakthrough song of an artist is key to their attention, resulting in a hype around the world. Shortly after, the artist is idolized globally. However, one song does not mean the legendary status of an artist. I think that the artist has given the pressure of making the second song at least equally good to the first one in order to move up on the so called 'legendary-status-ladder'. I also believe that the charismatic, and mystical personality of an artist also will interest the individual to find out what is behind the artist and his or her success. However, in the case of Justin Bieber for instance, being leveled with the demographic he makes his song for seemed to be appreciated more than him trying to act different than his actual personality. Therefore, the key here is being on the same level as the people you are targeting your songs too.

Social Sciences (Other) Graduate Poster Presentations

Name: Diego Humphrey

Title: Crisis in Black Science Education in the 21st Century: A Qualitative Approach

Faculty Advisor: Dr. Dolapa Adeniji-Neill, assistant professor of education

Abstract: The crisis in science education for Blacks in this country can be contributed to low levels of performance, fewer Black students majoring in science education and a lack of appreciation for the contribution of science education to society. Education in the areas of Science, Technology, Engineering, and Mathematics (STEM) at the junior and high school levels have not kept pace with the economic markets and national investment. Most industrialized countries value the contributions of science education that leads to growth and expansion of industry, social advancement, social change and economic growth. The number of Black students majoring in science education is much lower than other groups, such as whites and Asians. Research to address the experiences, perceptions and perspectives of Blacks in the area of science education is necessary to help close this gap. This qualitative study is designed to capture the interpersonal reflections and personal lived experiences of Blacks regarding science education. Perhaps these experiences will contribute to the body of literature on this topic and help to identify the best approaches to close the gap and cultivate interest of Black students in this area of Science Technology, Engineering, and Mathematics. Interviews, studies, and scientific publication will be referenced in the endeavor of highlighting and examining America's scientific educational dilemma.

Social Sciences (Other) Graduate Oral Presentations

Name: Selene Gatzonis & Dianna Scotto

Title: The Effects of Yoga on Stuttering

Faculty Advisor: Dr. Renee Fabus, associate professor of communication sciences and disorders

Abstract: This study investigated if a modified yoga intervention program decreases disfluencies and positively affects the self-perception of an adult who stutters. A lack of coordination between muscles used for speech articulation and respiration can contribute to increased speech disfluencies in individuals who stutter, therefore leading to negative self-perceptions. The aim of a yoga therapy program is to synchronize movement of the body with the breath, and to improve self-perception, thus targeting two concerns prominent in stuttering. The participant was a 33 year old bilingual professional male who stutters and was motivated to reduce his disfluent speech. He received three sessions of yoga therapy for 60 minutes within a two-week period. The modified vinyasa yoga program incorporated chest opening exercises, chanting and meditation. Pre- and post- yoga measurements of fluency and self-perception were collected using the Systematic Disfluency Analysis (SDA) and the Overall Awareness of the Speaker's Experience of Stuttering (OASES). The participant's speech disfluencies decreased after the modified yoga treatment, with a 24% decrease in disfluencies. His self-perceptions towards stuttering remained unchanged pre and post treatment. He reported his stuttering moderately impacted his life socially, emotionally and professionally despite the yoga sessions. In conclusion, a modified Vinyasa yoga program decreased the number of disfluencies in an adult who stutters. Future research should address the effects of long-term yoga practice on disfluencies and self-perception versus traditional fluency treatment. Results suggested that yoga be incorporated in clinical settings with adults who stutter.

Name: Rosannie Lopez

Title: Infectious Diseases, Medical Devices, and Computerized Physician-Order Entry

Faculty Advisor: Dr. Thomas Virgona, professor of health studies, physical education, and human performance sciences

Abstract: Contamination and transmission of viruses, bacteria, microorganisms, is a high risk in home care facilities. Therefore, it is essential that proper cleaning, sterilizing, and disinfecting of medical devices, medical instruments, and health care facilities take place on a daily bases. Also, it is important that health care workers follow universal precautions to prevent the transmission of infectious disease. The implementation of Computer-based physician order entry is essential to control and treat infectious diseases.

Name: Sean Rizzo

Title: Wake up: Will delaying school start times positively affect students' health and grades?

Faculty Advisor: Dr. Diane Caracciolo, associate professor of education

Abstract: Recent research points to a correlation between the amount of sleep an adolescent gets and how he/she performs on a daily basis in school. A mixed methods study on the effects of delaying school start times by thirty minutes to an hour was conducted in order to examine the attitudes of teachers and students toward later start times. Two schools were studied. The first was a traditional school with a 7:50am start time. The latter was a school that utilized staggered start times. Both teachers and students were interviewed and asked to fill out questionnaires about their thoughts on the merits of such an undertaking. Lastly, students' behaviors were observed in the first two periods of the day in order to see if there were significant signs of sleep deprivation. A secondary study on sleep deprivation and its possible effects on student drivers was also done. Some researchers have noticed an abundance of teen accidents in the morning. These accidents could have been caused by cognitive delays from sleep deprivation. The results of this study argue that a later start time would be healthy for growing adolescents.

Multidisciplinary

Multidisciplinary Undergraduate Poster Presentations

Name: Kimberly Atkins

Title: Does Money Buy Happiness

Faculty Advisor: Mr. Peter DeBartolo, levermore global scholars

Abstract: This research project examines the common question, does money buy happiness? A mixed method approach that incorporates both quantitative and qualitative research methods will be used. For the quantitative aspect, data from the Happy Planet Index and Gross Domestic Product index will be used in a simple regression analysis to determine whether there is a correlation between a country's happiness and the size of its Gross Domestic Product. At a superficial glance there seems to be no correlation between the two indices but the regression analysis can help us see if there is a correlation. For the qualitative aspect, I will be using my preliminary findings and observations acquired while studying in Costa Rica to make sense of these indices and everyday experiences of the people of Costa Rica, which ranks first on the Happy Planet Index. I hope through this multi-disciplinary project I will be able to bring us one step closer to answering the question "does money buy happiness." If this research indicates money doesn't buy happiness, then what does? Are there other behaviors or activities that do correlate with happiness?

Name: Samantha Baker

Title: The Effects of Hurricane Irene on Local Business and the Recovery Process

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: I propose to research to what effect natural disasters impact small business, and assess how vital a role government plays in the rebuild process. I argue that it is the goodwill of mankind through volunteer efforts both with physical cleanup and monetary donations that aid small business rebuild the most efficiently. Specifically I will focus on the effect of Hurricane Irene on two small towns that were devastated on August 28, 2011. Windham and Prattsville are towns merely 8 miles apart from each other and both were harshly impacted by the storm which led to extreme flooding that washed away many homes and destroyed local business. The two towns differ in the way in which they were saved. One town, which is home to a ski slope and thus has a corporate sponsorship, received response immediately. But the other town, Prattsville, is still slowly recovering more than a year and a half later. A couple of short weeks after Irene's invasion, Windham looked as if it had never been touched. Prattsville, even today, still appears to have been hit by some sort of bomb. I plan to go to these towns and survey local small business owners to gain their perspective on the devastation, and the recovery process as well. The surviving small businesses that are still flourishing today as a result of the hurricane have not done so without the help of volunteers and government intervention. The question I would like to address is, which is more effective, and can either work independently from each other?

Name: Valerie Cardona

Title: Systematic Vulnerability and the Proliferation of Sex-trafficking in Cambodia

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: Within the context of my research study, I will examine how young girls, adolescents, and women in Cambodia, are made vulnerable and dependent throughout certain aspects of their lives, and how this systemic vulnerability and dependency contributes to the continuation and the proliferation of sex trafficking and sex slavery within the region. In order to show this, I will analyze two factors that contribute to this problem: a.) abject poverty within the region, and b.) gender roles and gender expectations for both men and women.

Name: Janae Cummings

Title: Urban Farming in Harlem as a Means for Transformative Education

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: With the absence of arable green space in Harlem that can serve as a means for educating the youth in the neighborhood, using an urban farm transformative model for actualizing effective social change is the basis for my research. The visionary project includes an identified green space adjacent to a daycare center and two elementary schools. With the commitment of community leaders, collaboration with schools in the proximity, and a 10 step guide to community gardening, the project seeks to organize Harlem youth and provide a safe space that exposes them to agricultural practice in an urban setting. Additionally, the space will provide a therapeutic component as a dedication to Harlem youth who have experienced, witnessed or been victims of violence.

Name: Ida Iselin Eriksson

Title: Peace and Sustainable Development

Faculty Advisor: Mr. Peter DeBartolo, levermore global scholars

Abstract: Multiple scholars have argued that sustainable development is a pathway to peace. They claim that the first step is to create policies that allow us to use resources to meet the needs of the present, without compromising the future of others to meet their own needs, and also minimize these policies' negative impact on the environment. If we can do this, many scholars suggest that we can promote higher living standards and eventually eliminate structural violence, and then have peace. However my research examines how in the case of Costa Rica, peace actually came before sustainable development. It analyzes specifically how by abolishing the country's army and redirecting its military spending into human development and especially education, Costa Rica has become one of the leading nations in sustainable practice and policy. The paper explores and defines these theoretical concepts and argues that, based on the case study of Costa Rica, peace is just as much as pathway to sustainable development as sustainable development is to peace. The clearest difference is how nations choose to act on these two concepts to continue economic growth and development, while ensuring peace and human rights.

Name: Trevena Goulbourne

Title: Factors that lead to high school drop out rates in Jamaica

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: There are many factors that influence the youth of Jamaica to drop out of high school. Such factors include poverty and teenage pregnancy. The youth who engage in counterproductive acts often play a role in the increasing level of violence on the island. This research hopes to directly identify the factors that causes the youth to drop out of high school and hopefully present ways to counter them.

Name: Baneet Kaur

Title: Universal Health Care - Is it better?

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: Universal Health Care is a highly controversial issue around the globe and it holds special interest in the United States. This research will examine some of the arguments and comparative studies on America with other countries such as Belgium, Saudi Arabia, Germany, Egypt and Zimbabwe. Data will be collected through a survey on issues like access to drugs and equity for drugs from the embassies of these countries to get a greater understanding of the facts and figures that promote Universal Health Care and the challenges that the countries are facing.

Name: Jaspreet Kaur

Title: Biological Factors and Roles that Cross-cultural Play in Regards to Breast Feeding Babies

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: Breastfeeding plays a vital role in providing young infants with nourishment for growth and development. In this study the biology of enzymes, hormones, and nourishment that have a key role in breast feeding are explored. South Asian countries is the region chosen to look into the different cultures and case studies to better learn how they perceive breastfeeding.

Name: Nicole Lesniak

Title: How does cultural background affect a high school student's perception and academic achievement?

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: The controversy over whether students' cultural backgrounds affect their performance in high school is quite problematic. The research examines whether high school students feel that they are gaining knowledge through their classes, dedicating substantial time to their studies, and most importantly feeling as though their school's atmosphere represents their culture in a positive sense. In order to obtain results, I created a research survey for students in Sewanhaka High School, ranging in ages from 12 to 18 years old. The survey consists of three main parts: academics, culture and school atmosphere. Drawing from Jean Anyon's beliefs, the data from the survey will assist me in evaluating students based on the information they provide. In addition, I will observe these students in a classroom setting to see how their responses directly correlate to their daily behavior. My goal is to see not only how modern day students analyze their high school experience, but also to see how their culture and upbringing directly correlates to their perception of the school environment.

Name: Kristina Linacre

Title: Pura Vida!

Faculty Advisor: Mr. Peter DeBartolo, levermore global scholars

Abstract: 'Pura vida' (translating to 'pure life') is a cultural expression and saying used commonly in daily life in Costa Rica. Tourists who visit Costa Rica for the first time would get the sense that all citizens of the country live by this motto because it is seen on souvenirs in gift shops, mentioned in regular conversations between the locals, and used as a common greeting at restaurants and such. However, having been exposed to three different types of communities that exist in Costa Rica, it became clear that this motto may not have one universal definition, but rather may have different meanings to different people in each area. My research will draw on qualitative methods and personal experiences in Costa Rica at the University for Peace, the Humanitarian Foundation and Rancho Mastatal to conduct a comparative analysis on the cultural uses of "pura vida" in these three settings. The first community within Costa Rica that I will focus on is the general population, which includes the people of San Jose, Ciudad Colon, and those that I met at the University For Peace. The second will be the Nicaraguan immigrants living in La Carpio and third will be the people of the village of Mastatal in the rainforest. My research will explore and analyze how this expression is actually used and interpreted very differently in Costa Rica in these three different communities.

Name: Andrew Martin

Title: Accessing the Potential Dangers of Hydropower Energy in Costa Rica

Faculty Advisor: Mr. Peter Debartolo, levermore global scholars

Abstract: My research will explore the environmental impacts of dams in Costa Rica. With 80 percent of the nation's total energy derived from hydropower sources, the existence of dams contributes heavily to Costa Rica's reputation for being ecologically friendly. My research will focus on the potential dangers of relying so heavily on a single energy resource, both from an environmental perspective and an energy security one. Despite the nation's reputation for being environmentally responsible, the notoriety dams often have in wreaking havoc on regional ecosystems, makes their abundance in Costa Rica a topic of controversy. Using Costa Rica as a case study my research attempts to uncover the reality of this situation by shedding light on the techniques and strategies that are being used to: (1) Assess the overall environmental impact of the nation's dams and (2) Diminish the negative externalities caused by their use. In terms of energy security, I will address the role climate change (rainfall in particular) may have on the amount of energy produced by dams. Following this idea, I will discuss the potential dangers of hosting an energy infrastructure that depends primarily on the continued sufficiency of a single energy resource. The purpose of this research is to establish that the idea of sustainability/renewability is not inherently linked to a particular energy resource. Instead, it is the environmentally and economically conscious methods by which we exploit this resource that merits that classification.

Name: Rebecca Noriega

Title: Reimagining work: Money, Jobs and the common good

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: This research project seeks to understand the principles that govern attitudes about work in the current social context. To what extent do people subscribe to the notion that competition is the primary motivator for an individual's contribution to society? Should employment be guaranteed to all those who want to work? What criteria should be used to determine compensation for different types of experience, risk, effort, etc.? What is a reasonable expectation for a standard work week? What laws and regulations need modification in order to benefit the greater good? What responsibilities should we be held to, and what rights should be guaranteed? What factors contribute to someone's willingness to contribute skills, efforts and time to the community well-being?

Name: Ann-Marie Ramsaroop

Title: Writing: Tool of Empowerment or Hindrance of Social Change?

Faculty Advisor: Dr. Devin Thornburg, chair and professor of education

Abstract: Traditionally considered to be the "weaker of the sexes," women have struggled against a system that has worked to restrict their power. In recent history, however, writing has become a growing form by which women may express themselves. Yet, in some countries, writing remains a form of oppression. This presentation will strive to examine, through the use of a multiple case study methodology, examples in which writing may be either a tool of empowerment or a form of oppression for women taking into account how "empowerment" is defined by culture. Beginning first with the role of women in society, this presentation will trace the change in the portrayal of women in popular culture and therefore, in literature and the affect that this has on both the woman and society.

Name: Nathaniel Reel

Title: Civil Engineering's Role in Sustainable Development

Faculty Advisor: Mr. Peter Debartolo, levermore global scholars

Abstract: The following research consists of an historical analysis of structural engineering's role in sustainable development in Latin America, with a specific focus on the successful implementations of Costa Rica's green building methods. Development issues are initially analyzed along with comparisons between Costa Rica and other Latin American countries in the region. The research explores the advantages of how natural building techniques reduce negative externalities on the environment, and also examines structural engineering's connection with environmental engineering. The project identifies specific cases in which natural building is the most efficient method of building. It also analyzes and discusses the possibilities for structural reform in Latin American countries based on Costa Rica's progress with these unique engineering approaches.