

## Arts

### Oral Presentation Undergraduate

**Name:** Enas Elmohands

**Title:** Art and Human Rights

**Faculty Advisor:** Professor Cindy Maguire

**Abstract:** This research examines the role of art in conflict and its ability to transform dialogic practices. Artists elevate culture and through aesthetics, create realities in which there can be social transformation and exchange. I will explore how various mediums of art can empower silenced narratives and enrich human rights discourse. Specifically focusing on the Western Sahara, I will use my documented experience in an international arts festival [ARTifariti] in the refugee camps to suggest arts-based approaches to human rights advocacy.

**Name:** Elise Helmers

**Title:** 'To Wake the Dead': Memory and Mourning in the American Art of the Late 19th- Early 20th Century

**Faculty Advisor:** Professor Maya Muratov

**Abstract:** Sculptural art in the American Renaissance style is defined by the use of imagery harkening back to classical antiquity. Following the Civil War, the country saw a rise in commemorative monuments using allegorical figures in expressions of mourning. Daniel Chester French, working in the late 19th and early 20th centuries, was the leading American sculptor to adhere to this trend. While he is most well known for "Abraham Lincoln" of the Lincoln Memorial in Washington D.C, his smaller works capture the classicized expression of grieving so distinct to this period of American artistic expression.

The paper will discuss unique qualities of memorial sculpture at the turn of the 20th century, with a particular focus on the notion of memory. Daniel Chester French's "Memory", a statue from the collection of the Metropolitan Museum of Art, will be at the center of discussion. This female figure holds a mirror, acting as a signifier of commemoration. Mirrors were often perceived as conduits into another time or place, and it is their role as visual portals that will be further explored in this study. There will be an effort to understand the symbolic imagery of remembrance used in antiquity and its influence on American art. The works studied will explore the ways in which dedicatory representations of the past became blended with the cultural mourning practices of post-Civil War America, creating a new pictorial language for commemorative sculpture.

**Name:** Melissa Waldvogel

**Title:** A Knight, His Wife, Their Arms, and Their Grave Marker: An Image of a 16th-Century Flemish Gravestone from the Adelphi University Art Collection

**Faculty Advisor:** Professor Maya Muratov

**Abstract:** Among a variety of prints, drawings, paintings, and sculptures, the Adelphi University Art Collection boasts a clarified rubbing of a gravestone of a man and his wife. However, any information about the rubbing's provenance or the stone's origins and current whereabouts is sadly lacking.

While an anonymous grave marker with rich decoration potentially could tell a story in itself, an inscription containing factual information opens doors to further research and revelations. In this respect the gravestone of Lodowijc van Leefdael is a veritable goldmine of information. This 16th-century Flemish gravestone depicts the effigies of Lodowijc and his wife Margriete, their respective familial coats of arms, various iconographic attributes, followed by the numerous dates, cities, and titles, included in the fairly lengthy epitaph, all of which allow one to contextualize this tomb both historically and geographically.

This paper presents an investigative study of the ‘word and image’ found on this funerary marker. Based on the figural and textual information, an attempt is made to reconstruct Lodowijc’s social position in the 16th-century Flemish society, including the scope of his landholdings and the funeral arrangements for him and his wife. This combination of the pictorial and the written serves as a starting point from which one can delve into the late medieval Belgian history, namely the social, political, and cultural implications of living and dying in 16th century Flanders.

## **Poster Presentation Graduate**

### **A17**

**Name:** Diana Gong

**Title:** Drawing techniques, creating texture using graphite pencil

**Faculty Advisor:** Professor Pamela Koehler

**Abstract:** The term drawing is applied to works that vary greatly in technique. It has been understood in different ways at different times and is difficult to define. Drawing is the practice of applying marks, as line, texture and tone, to a surface or support, usually paper, using various medium such as graphite, charcoal, ink, and chalk. Pencils, brushes and other tools are used to apply the medium. Drawing is a visual language that can communicate ideas and information through images. When I first took a drawing class, I was overwhelmed on how many tools and techniques there were to create different types of drawings. The first and most popular thing you learn in class is drawing with a graphite pencil, and by creating texture to your drawing we can bring remarkable images to life. So what is texture? We touch an object and can feel that it is smooth or rough, but how do we translate what we feel into what we see. The type of surface and the amount of texture determines the amount of light that is reflected off the surface. We have hard surface, soft surface and rough surface. Using a combination of pencil strokes, you can create a texture-rich drawing that will help define the image, giving it a more realistic style. The end result of my drawings shows how graphite pencil can be versatile by using a variety of graphite drawing techniques.

## **Poster Presentation Undergraduate**

### **A1**

**Name:** Jason Arasmo

**Title:** Keep the American Dream Alive

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** The American Dream is the belief that one can pursue and achieve a life of prosperity and success regardless of their social class. However, with today's high unemployment rates, many people struggle to find jobs at all. Some may say the American Dream is slowly dying. This can be resolved by buying American-made products. By buying American, the money stays in the United States, boosting the economy, creating jobs, and keeping the American Dream a reality to future generations. The idea behind my project was to show the younger generation pleading viewers to buy American products so that when it is time for them to pursue a career, the American Dream is still very much alive. The solution of my stamp is depicted by using an original photo of my younger cousins, holding pictures of American flags colored in with original Crayola crayons. Crayola crayons have been exclusively made in the USA since 1903. All Crayola crayons are all made in Easton, Pennsylvania and each box is marked with the American flag to show that this product has been manufactured right here in the USA. By using the photo of my cousins, adding the title "Keep the American Dream Alive," and incorporating Crayola into my stamp, I was able to express my idea: the need to buy American products.

### **A2**

**Name:** Karoline Bru, Ida Iselin Eriksson

**Title:** Food Security: The importance of closing the gender gap

**Faculty Advisor:** Professor Stephanie Szitanyi

**Abstract:** This research paper examines how states, international organizations, Non-Governmental organizations and Multinational Corporations work on this issue in reliance to the standards set by the United Nations. Exploring how the different actors address the issue of gender in agriculture, will let us generate an idea of what is missing, and thereby come up with a new proposal on how to ensure equal rights to men and women in agriculture in order to develop a more sustainable and food-secure future all over the world. Ensuring rights to women everywhere will benefit everyone in the long run and be one of the most efficient ways in defeating hunger.

There is a general misunderstanding among people that the world does not produce enough food to feed the entire human population, and that is because, in certain parts of the world, people still die from hunger and malnutrition. The assumption that there is a shortage of food is wrong, and multiple scholars, scientists and activists have proven that the world does produce more than enough food to feed every living human being (The Economist 2011, Feed The World). However, there are widespread inequalities within food distribution, meaning that the food is not reaching the people who need it the most, and there is currently an uneven distribution of food in the world. Today, food is starting to be grown sustainably, but according to one scholar, "most of it is fed to animals (this

accounts for 80% of all arable crops in the United States, a figure close to the world average)” (Latham, 2000, para. 6). To add to the uneven distribution of food resources is the fact that in the areas where hunger is most present, agriculture is also underperforming for a wide variety of different reasons.

### A3

**Name:** Emma Cestare

**Title:** Built by Union Hands

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** The inspiration for this “Made in America” postage stamp assignment is derived from my family, more specifically my father. I’ve seen the effects of union labor first hand because of him and wanted to express a pro union standpoint in this stamp since, to me, that’s what Made in America means. America’s unions maintain jobs and the rights of the workers, which is far more important to support than saving some cash by importing your fancy new jacket from who knows where. I wanted to include the hand drawn style into the stamp to emphasize the importance of union tradesmen and hand skills, as those are the results of the hands that make the fist of solidarity (a symbol of the union’s support and brotherhood). Union hands built this country, so why wouldn’t you buy union made?

### A4

**Name:** Julianna Claase

**Title:** From Stream to Shining Stream

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** So much of today’s daydreams of traveling are filled with jet setting abroad to European countries and experiencing the unusual and the different. While I can honestly admit I am a victim of these whimsical hopes and plans, I can admit I am also part of a group that forgets the innate magnificence that exists in our own backyard. The rolling hills of the Adirondacks, the rocky coastal landscape, the sights of the Grand Canyon; America is filled with beauty worthy of exploration. These American adventures are something that Airstream trailers have endorsed since their inception in 1931. “From Stream to Shining Stream” is a postage stamp that whole-heartedly supports this concept. I’ve chosen to illustrate this vision in a hand-rendered landscape of the iconic trailer in its natural environment, pairing it with a play on the heart and soul of a song that embodies our patriotism. An entirely American-made product that is truly an icon of the vintage Americana and whose tradition has carried into today’s country-wide travel, Airstream trailers reflect the beauty of the land around us and are the epitome of “Made in America.”

### A5

**Name:** Joseph Dominguez

**Title:** Masked in America

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** While researching what to do for my stamp project, the answer to my solution was staring me right in the face. In my room, above the door, I have a small collection of Ben Cooper masks and on one of them, the words USA are painted on. After doing some

research, I was able to find out that these masks were exclusively made in America and Ben Cooper was one of the largest and most successful costume manufacturers in the U.S. This was perfect because it allowed me to combine my love of Halloween while promoting the importance of buying American made products.

## **A6**

**Name:** Nicole Howland

**Title:** Keep America In The Game

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** My graphic assignment was to design a postage stamp that illustrates the importance of products made here in America. During my research, I found that manufacturing employment dropped to a staggering 8% of the total workforce. Just in the last 10 years alone, the U.S. has lost out on approximately \$2 trillion in cumulative trade deficits with China alone. I wanted to incorporate the classic Louisville Slugger, in particular, who continues to produce their wooden baseball bats in Louisville, Kentucky. I utilized my baseball imagery ghosted behind an American constructing a bat to highlight the issue, and to encourage domestic manufacturing in all industries with pride and celebration of what it is to be an American in our outstanding nation. This pride is such a powerful force that can be re-directed to bringing back quality American manufacturing to fuel our economy with countless jobs and national revenue. There is nothing like owning a product with a tag that reads "Made In America". Let us return once again to being a driving force in manufacturing, and make sure we KEEP AMERICA IN THE GAME!

## **A7**

**Name:** Rahama Junaid

**Title:** Media Criticism through Art and Design Education

**Faculty Advisor:** Professor Cindy Maguire

**Abstract:** In our technologically advanced society, it is impossible to shield oneself from the world of advertising and media. Children and adolescents particularly become prey to advertisements. The objectification of women is especially prevalent across all forms of media. The media dictates how women should dress, behave, promotes they possess limitations, and gives men the notion women are to be viewed in a position of inferiority. The introduction of Photoshop further allows advertisers to alter and reconstruct models, resulting in physically unattainable conceptions of femininity. The targeting of children and youth starts at a young age, including the toys they play with to the cartoons they watch. Hence, It is extremely vital for us to instill criticism and scrutiny towards such media when they are young.

it is essential to foster within children the ability to be a critical reader of the world around them through school, where they spend most of their time. Art and Design education is a subject area in which students can analyze social, political, cultural, and inter/intra personal aspects of their lives. It possesses the ability to help educators introduce a spectrum of social issues into the classroom, making it ideal to help students deconstruct media images and messages.

Through my research I will explore how effective the field of contemporary art and design education is in allowing students to question, analyze, criticize and even

counteract harmful media messages that target gender and portray women in positions of inferiority. I will research accounts where visual culture in relation to gender has been effectively discussed in the art classroom. The goal of this investigation is to add to the knowledge base of effective approaches and practices for utilizing art and design education. Employing this paradigm ensures young people see the world by utilizing art and design education as a discipline that aids in deconstructing existing dangerous social messages.

### **A8**

**Name:** Jaclyn Loney

**Title:** Choose SK. Support the USA.

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** SK tools has continued to be an American based company for almost 100 years. On every single SK tool, you can find “USA” proudly stamped, signifying the company’s loyalty to quality, trust, and the American worker. With this postage stamp, I chose to show SK tools in an iconic manner: in the back pocket of a pair of work jeans. As the daughter of a blue-collar worker and car enthusiast, this image evokes a sense of pride and nostalgia. My father relies on tools everyday for his profession and hobbies, so the quality of the brand he chooses is very important to him. Passed on from generation to generation, not only my father, but my entire family, has always used SK tools due to the fact they support the American worker. Choosing an American made tool has always been the standard for my family because it supports workers just like themselves.

### **A9**

**Name:** Tommy Mays

**Title:** Our Ace in the Hole

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** My postage stamp is based on one of the most renowned all-American products, Bicycle Brand Playing Cards. I chose this topic because throughout my childhood I have always enjoyed playing games with my family, especially ones including cards. While doing my research, I had learned about the origins of Bicycle’s brand name and how it began from a small local town in Cincinnati Ohio, into one of the largest known manufacturers of playing cards in the world. After gathering my research, I then began collecting different types of cards that would best show the product and how it emphasizes the idea of the importance of “Made in America”. I then took photos of the cards in my house, in a location I had set up, that shows them best. My idea was to show these timeless playing cards as a prime example of American history and how buying American products is Our Ace in the Hole.

### **A10**

**Name:** Allison Philbin

**Title:** True American Blend

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** In 1934, when prohibition was a prevalent issue, Pabst Blue Ribbon Beer campaigned that ‘the nation needs its beer.’ Even through times of difficulties, Americans believed in the importance of appreciating of people coming together, in this case, over a

beer. Blending together, we make up the strong country of America, and we have a lot of pride in that. My stamp, "True American Blend", epitomizes Pabst Blue Ribbon Beer and the theme of 'Made in America'. Through this stamp, I decided to pair the iconic Pabst Blue Ribbon Beer can with strong type setting of "True American Blend." It was a conscious decision to keep the stamp predominantly red, white and blue to reinforce the design on the can and our country's colors. Since 1844, Pabst has been brewed in Milwaukee, Wisconsin and still carries a strong reputation of being an American drink. It is important for us to realize that we are still capable to use our land to produce things for American consumers. At the end of a long day, it is comforting to know that we can have pride in being able to enjoy something made on our land, by our people.

### **A11**

**Name:** Christi Scoca

**Title:** ENLIST in Your Country. Buy American.

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** My grandfather, a World War II veteran, inspired my "Made in America" postage stamp project. He believed patriotism began at home and throughout his life would only purchase products made in America. Through my research I discovered that military uniforms are legislated by the United States government and by law should be manufactured in America. The Berry Amendment enacted in 1941 is, "a statutory requirement that restricts the Department of Defense from using funds appropriated or otherwise available to the DoD for procurement of food, clothing, fabrics, fibers, yarns, other made up textiles, and hand or measuring tools that are not grown, reprocessed, reused, or produced in the United States." My stamp design utilizes his military uniform, includes a photograph of him during the years he served in the U.S. Army Air Force, as well as the American Flag. The composite of the images achieved in Photoshop promotes the sale of military uniforms in America and also acts as a tribute to my grandfather. He passed away in July of 2000 and per his wishes is buried in a military cemetery.

### **A12**

**Name:** Kristina Sharrott

**Title:** It's Tradition. It's American Made.

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** Brooks Brothers is a company that exemplifies the meaning of tradition, which is keeping jobs within the U. S. A., passing down their jobs to the next generation of American citizens. They understand that consumers are obsessed with heritage, and that heritage should be addressed with quality and pride. In my postage stamp solution, I choose Uncle Sam, an iconic image of American pride and heritage, to channel the message of tradition. Through the use of photography, and modeling, I will have dressed up this icon in the Brooks Brother attire, and pose the icon in a way that symbolizes class, tradition and quality. This icon will be then paired with text that easily communicates the message of supporting tradition of U. S. A. made products.

### **A13**

**Name:** Sabrina St. Eloi-Chacha

**Title:** Fuel America

**Faculty Advisor:** Professor Dale Flashner

**Abstract:** My approach to solving 'Made in America' postage stamp project is to illustrate the importance of American energy being produced in America. I plan to photograph a pair of hands holding coal, to highlight its importance to America. I want to show really rugged hands to emphasize the labor force in America. Through photo manipulation I will give the imagery a vintage feeling, as if the photo was taken during the late 1800s (the height of American coal mining). The United States has the largest coal reserves in the world, estimated to be 1/4 of the world's total known coal reserves. If this is true then there should be more coal mining and less importing of other fuels. By tapping into our own energy sources, more jobs could be opened up for Americans.

## **Humanities**

### **Oral Presentation**

#### **Undergraduate**

**Name:** David Campmier

**Title:** Anglo-Catholicism and Orientalism as the Foundations of Alfred Thayer Mahan's Sea Power

**Faculty Advisor:** Professor Martin Haas

**Abstract:** During his voyage to Japan and China from 1867-9 as a young naval officer, the 19th century naval strategist Alfred Thayer Mahan's correspondence to his father, mother, and sister, demonstrated the presence of two important themes: Orientalism and Anglo-Catholicism. These themes would later become the foundation of Mahan's famous book, *Influence of Sea Power Upon History*. To clarify, Orientalism is defined in the spirit of scholar Edward Said's work. Orientalism is a part of Western intellectual and political culture, which attempts to describe the peoples, governments, and civilizations of the Eastern world as backward, strange, feminized, inferior, and alien. Anglo-Catholicism is defined as a movement within the Anglican Church which argued that the Anglican Church should retain or reinstate certain doctrines and practices of the Roman Catholic Church. These themes became an integral part of Mahan's intellectual development. Mahan's observations about the Orient and Christianity reveal the assumptions and biases which would guide his insights about the nature of Sea Power, history, and U.S. imperialism.

**Name:** Cailin Giard

**Title:** How Popular Culture Condone and Perpetuates Human Trafficking

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** Popular culture is an extremely influential force and powerful voice in today's society. With the help of the ever expanding technological community, it has the ability to reach a vast array of people, especially impressionable young children. Popular culture has turned the federal crime of Human Trafficking into an accepted and respectable way of making money. This study sheds light on the individuals and cultural norms that are widely celebrated in popular culture but have a much sinister side. It will examine the fact that there are twenty-seven million trafficked people worldwide, the United States



being the number one destination for child sex slaves, and analyze popular culture's role in condoning and perpetuating this crime against humanity.

**Name:** Catherine Jermolowitz

**Title:** Enforcing Modernity: Spatial Determinism in the Post-War Period

**Faculty Advisor:** Professor Nicole Rudolph

**Abstract:** Society is divided into two spheres: the public, usually associated with government, and the private, usually associated with the home and family. The degree to which public should be separate from private (or if they should be separated at all), the differing interest of the spheres, and their attempts to exert influence upon, or resist influence from, each other often creates conflict. Public sphere actors have attempted to exert their influence on the private sphere to promote certain ideas, such as a definition of modernity, which has been enforced through home design and state-promoted methods of living in the home, most notably in the period after the Second World War. Scholars have examined public sphere actors' attempts at modernizing through the private sphere in countries such as Great Britain, France, and the Soviet Union, but have generally discussed these cases separately. This paper considers three cases together: council flats in Great Britain, khrushchevki apartments in the Soviet Union, and renewal projects in the United States. Through an examination of primary and secondary sources including analysis of inhabitants' dwelling practices, as well as of the actual physical spaces, it is clear that there are limits to these modernizing projects, and that it is ultimately private sphere actors who decide how the space will be used. This paper argues that, private sphere actors' notions of autonomy outweigh public sphere actors' official notions of progress. Public sphere policymakers cannot simply impose their will onto the private via design; they must also account for these notions of autonomy and maintain an ongoing negotiation with the private sphere.

**Name:** Jennifer Lin

**Title:** EAM-ELAS: Examining the Proliferation of the Greek Civil War's First Two "Rounds"

**Faculty Advisor:** Professor Nicholas Rizopoulos

**Abstract:** Observers of modern Greek history often see it as a tumultuous roller coaster ride due to the constant political upheavals over the course of several decades. The Greek political system ricocheted from revolving around an almost absolute monarchy to a nominal constitutional monarchy in the late 19th century. A (short lived) republic was instituted after World War I, but collapsed in the face of a brutally repressive military dictatorship immediately after the start of the Great Depression. The many opposing political forces ultimately saw their struggle for power culminate in a bloody showdown during the Axis Occupation of World War II. Even before liberation, the most powerful of the various armed Greek resistance groups, EAM-ELAS, tried to overwhelm their opponents by instigating a massive battle which not only resulted in a large death toll, but set the stage for continued conflict. While there is very little specific official documentation indicating when each phase of the Greek Civil War began, most historians agree that it occurred in three distinct stages. The height of the first "round" of conflict came in 1943-1944 when Greece was still under (primarily) German occupation. The second "round" took place during December 1944 and is often referred to by historians as

“the Battle for Athens.” This paper will limit its analysis to these first two stages of the overall Greek Civil War in order to beg the question of when, if at any point, a compromise satisfactory to all the warring political factions could have been reached in order to conclude the long conflict.

**Name:** Mahnoor Misbah

**Title:** East Meets West: An Examination of Ibn Khaldun's Influence on Western Thought

**Faculty Advisor:** Professor Edward Reno

**Abstract:** The purpose of this research is to study the influence of the East on the West via one famous Eastern philosopher, Ibn Khaldun. Khaldun is often known as one of the founding fathers of sociology and economic theory, and the goal of this paper is to determine what influence he has had on the Western school of thought. This will be done by examining one particular concept Khaldun writes extensively about, called asabiyah, which is the social bond that ties individuals together in a group or community. Asabiyah will then be viewed in a Western context, and applied to modern-day concepts such as Nationalism and Social Capital. The goal is to connect East and West through Khaldun and examine what links exist between both worldviews.

**Name:** David Perrotto

**Title:** The Agency of Iroquois Women through Corn

**Faculty Advisor:** Professor Christina Zaccarini

**Abstract:** Native American tribes often used food as a means of currency. Surpluses of food were often bartered with other tribes for other food items or supplies. The most popular food that was bartered and traded was corn. Among the Iroquois, it was the woman's responsibility to grow, harvest, and prepare the corn for both food and ceremonial services for the tribe and trade with others. This paper focuses upon on the importance of Iroquois women, with particular emphasis on the Mohawk and Seneca tribe. It will explain their role in farming the corn and how they gained agency within their tribes because of their responsibility for tending to the corn crops, an important commodity to the tribe. It will also briefly touch upon the ways that the creation myth was tied to Iroquois views of women and corn. This paper will analyze the firsthand accounts of, Father Joseph Lafitau, Henry Hudson, and General John Sullivan. It will also utilize the works of scholars such as of Daniel K. Onion, John P. Hart, Judith K. Brown, Sara Henry Stites, and Arthur C. Parker to link the responsibility of women in corn production to the privileges they received in the tribe and their agency in Iroquois society.

**Name:** David Perrotto

**Title:** Grain Tax and Revenue in Roman Egypt

**Faculty Advisor:** Professor Edward Reno

**Abstract:** The Roman Empire had reached its zenith at 27 B.C. during the reign of Octavian Augustus. The Roman Republic had conquered most of Europe and parts of North Africa before the Republic turned into an Empire. Egypt was annexed to Rome as a province after it was defeated in the third Roman civil war in 30 B.C. Egypt proved to be very useful to Rome, serving as the bread basket of the Empire, shipping grain to the capital and to the Greek cities in Lower Egypt. This paper will analyze the economic

dimension of the Roman – Egyptian relationship focusing on the grain trade and taxes. This paper will show how Roman interest in the continued economic viability of Egypt led to the country being developed so the Romans could gain maximum use of Egyptian resources.

## **Poster Presentation Undergraduate**

### **A14**

**Name:** Stephen Levine, Rebecca Farina

**Title:** Cinematic Studies

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** Often times we view movies as a way to pass the time and don't really consider them for much else. While cinema can touch a variety of different cultures and genres, does this mean anything for its viewers? It's often debated whether or not violent movies cause people to be violent, but what about other movie genres? By that philosophy, romantic cinematic viewers may be romantic and comedic films could breed comedians. The goal of this research is to determine if different genres of film affect people in different way. Do people think differently after viewing a light-hearted film as opposed to a tense drama? This study seeks to not only discover if film can have this affect, but also what that affect will be. By giving viewers of films different personality tests after seeing different genres of film and studying their behavior after them, we seek to discover whether the cinematic experience is just an hour and 30 minutes gone and past or something that can change the personalities and social interactions of individuals.

### **A15**

**Name:** Ammie Lin

**Title:** Human Rights in Media Today

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** There is an estimate of at least 100,000 citizen children who are victims of human trafficking and about 17,500 people trafficked into the U.S. each year. The National Human Trafficking Resource Center has reported potential human trafficking incidents in every state. In addition, human trafficking violates at least 20 out of the 30 Human Rights, which are defined by the Universal Declaration of Human Rights. The media has the power and responsibility to be society's investigator, muckraker, authenticator, aggregator, and empowerer. The media also sets the agenda. This study looks at how often U.S. newspapers publish these human trafficking incidents as local/regional articles through content analysis of top U.S. newspapers. It will also look at how many human trafficking-related issues are published under international/world articles. Furthermore, this study will determine whether or not reports on human trafficking in U.S. newspapers have content that inform readers about how to recognize signs of human trafficking, which is important for the protection of citizens. Lastly, articles will be examined for content on the root causes of human trafficking in the U.S.

## **A16**

**Name:** Joseph Taglienti

**Title:** Assujettissement: Forming and Regulating the Subject

**Faculty Advisor:** Professor Craig A. Carson, Dean Richard Garner.

**Abstract:** Beginning with Laclos's 'Les Liaisons Dangereuses', this project originally sought to examine the theater of appearances in eighteenth century France by developing a theory of "social panopticism": surveilling the acts of others while being paranoiacally aware that one's self is also being surveilled. However, after analyzing the work of Nietzsche, Freud, Foucault, and various contemporary political philosophers, preoccupation shifted to more nuanced theories of subjection, or more particularly, the double-edged implications of the French word 'assujettissement'--the simultaneous formation and regulation of the political subject within the State. Concerned with the ways in which structural, disciplinary power, i.e. absolute sovereignty, controls and creates obedient subjects, the foci of this research were determined in two, coextensive directions: the manipulation of psychoanalytic mechanisms, such as the Oedipus complex and introjection, and the manipulation of the affects. Ultimately, the focal points shared an epicenter in a phenomenon called "Oedipal Statehood," which channels the oedipal drive, panic, love, and fear, into a matrix of dominance, wherein the subject obeys his ruler because he has superimposed his father onto his (the ruler's) image. This phenomenon was then applied to the work of Edmund Burke and Thomas Hobbes in order to obtain a more comprehensive understanding of how they mutually define nature, artifice, right, and government.

## **Life Sciences**

### **Oral Presentation**

#### **Graduate**

**Name:** Emily Dernbach

**Title:** Wave exposure, available prey density, and predator cues elicit variable foraging behavior in *Nucella lapillus*

**Faculty Advisor:** Professor Aaren Freeman

**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 *Nucella* morphology and behavior, the movement and foraging efficiency of *Nucella*'s predators and the abundance of available prey. In this study we compared *Nucella* foraging and found that overall whelks collected from exposed areas consumed less than those from protected. Crab cues, site of origin and the presence of alternate prey affected *Nucella* foraging decisions: wave-exposed *Nucella* reduced foraging on mussels but wave-protected *Nucella* reduced foraging on barnacles. Because *Carcinus* also feeds on mussels, *Nucella* may better avoid the crab by moving to barnacles. Results will be discussed in light of ambient prey density, energetic demands, and results from prior studies.

**Name:** Candice Marcos

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

**Faculty Advisor:** Professor Heather Liwanag

**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. As a result, pinnipeds have developed a combination of fur and blubber for insulation that allow for both a terrestrial and aquatic lifestyle. Harp seals (*Pagophilus groenlandicus*) depend on their thick insulation to keep warm in the frigid habitat of the North Atlantic and Arctic Oceans. Although adult harp seals use blubber as primary insulation, newborn harp seals rely on a fur coat as 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 thermal properties of harp seal fur with ontogeny. Thermal conductivity of harp seal pelts was measured in air and water for neonates (1 day old), early nursing pups (4 days old), late nursing pups (9 days old), newly weaned pups (2 weeks old), molted pups (3 weeks old), and adults. Thermal function of fur in air decreased with age, with the lowest thermal resistance in molted pup and adult pelts. Thermal function of the fur was significantly reduced in water for all age classes. In weaned pups and adults, this decrease in was compensated by a thick blubber layer. The diminished function in fur when submerged represented a significant reduction in total insulation for nursing pups. Ultimately, fur is an important component of thermoregulation for harp seal pups on land, and the development of a thick blubber layer is key to their transition to a primarily aquatic lifestyle.

## **Oral Presentation**

### **Undergraduate**

**Name:** Halvor Adams

**Title:** Latitudinal Gradient of Reproductive Investment in the Marine Snail *Nucella lapillus*

**Faculty Advisor:** Professor Aaren Freeman

**Abstract:** *Nucella lapillus* is a species of marine snail found on exposed and sheltered shores throughout the intertidal zone. Their vase-shaped egg capsules (about 10mm x 3-4mm) are deposited on rocks and under stones. The number of capsules laid varies with abiotic conditions and the female's size and nutritional state. In this study we investigated the influence of latitudinal gradient on reproductive investment of *N. lapillus*. Egg capsules and mature snails were collected over the summers of 2012 and 2013 from sites with different wave exposures ranging from Connecticut to southeastern Maine. Egg capsules and mature snails were brought back to Adelphi along with additional population data collected from each site. The data collected from each site included the size and density of *N. lapillus*, and the egg density (number per meter squared). Egg capsules were photographed and the eggs removed and immediately photographed. The size of egg capsules and eggs were then compared to determine the influence of latitude and wave-exposure. I hypothesized that egg capsules from regions of lower latitudes would be larger and would contain more embryos. Results are discussed in terms of energy expenditure and climatic influences.

**Name:** Carlos Ballon

**Title:** Stress affects mud crab consumption rates

**Faculty Advisor:** Professor Aaran Freeman

**Abstract:** It is common amongst different species of mud crabs (Xanthidae) populations to compete over a desired niche. In this study the competition between two Xanthidae mud crabs species were observed (*Panopeus herbstii* and *Eurypanopeus depressus*) over a month and a half long study. In this experiment we varied temperature and introduced a parasitic barnacle (*Loxothylacus panopaei*), known to use mud crab species as a host. We assessed how these stresses affected mud crab consumption of mussels. Over the course of the experiment crabs were kept under ideal conditions resembling their original habitat inside a laboratory setting. Four tanks housed 6 cages containing one crab each. An additional cage housed 5-15 mud crabs to further assess infection rate of these crabs. The conditions of each tank were manipulated under varying cold/warm temperatures and presence or absence of *Loxothylacus panopaei*. This study assessed how temperature may have affected crab consumption under warmer temperate waters than those exposed to colder temperatures. The parasite has yet to infect any crabs and is still under investigation if whether it can affect consumption rates between the two species.

**Name:** Cassandra Bianco

**Title:** A head start begins at the vertebral column: The correlation between vertebral development and sprint speed in *Oncorhynchus mykiss*

**Faculty Advisor:** Professor Andrea Ward

**Abstract:** The vertebral morphology of an individual has significant effects on locomotory performance. Vertebral morphology varies immensely across the wide diversity of fishes, however, there is also potential for variation among a single species. It is known that the optimal total number of vertebrae and ratio between caudal and pre-caudal vertebrae is responsible for the success of an individual's swimming performance. This research examines the relationship between the effect of variation in vertebral number and ratio on sprint speed in rainbow trout (*Oncorhynchus mykiss*). It is hypothesized that fish with a greater number of vertebrae, and therefore more spinal flexion, will travel at a greater velocity than those with a fewer number of vertebrae. In order to examine this, fish eggs were fertilized and raised at 12°C. Following development when the hatchlings reached a free-swimming stage, the fish were placed in an elongate tank and startled to induce sprinting. The response was recorded using a high-speed video camera and analyzed by tracking head movement throughout the response. Using the tracking data, the average velocity over the cumulative distance travelled was calculated. Then, each individual's vertebral number and ratio were quantified. Previous studies have shown that individuals reared at lower temperatures develop more vertebrae, while individuals raised at warmer temperatures develop less. The expected outcome of this study should support the fact that fish developing in a global climate that is continually warming will have decreased swimming ability and therefore poor evolutionary success overall.

**Name:** Gabrielle Bruno

**Title:** The Effects of Temperature Range on the RA Pathway in *Danio rerio*

**Faculty Advisor:** Professor Andrea Ward

**Abstract:** In the early stages of development, an embryo is highly sensitive to its surrounding environment. An environmental abiotic factor like temperature has been demonstrated to seriously affect somitogenesis in developing zebrafish (*Danio rerio*). Aside from temperature, development has also showed to be affected by excessive amounts of retinoic acid (RA). The RA pathway is responsible for proper pattern formation and organogenesis in vertebrate development. Previous research has shown that within a species, individuals reared in higher temperatures and higher concentrations of retinoic acid develop fewer somites than when reared in lower temperatures and lower concentrations of retinoic acid. This research examined the relationship between the effect of temperature on somite and skeletal development and its subsequent effect on the RA pathway. I hypothesize that zebrafish raised in low temperatures with elevated levels of RA will have a wildtype somite number. In order to examine this, zebrafish embryos were collected and evenly distributed between four tanks with temperatures ranging from  $24.5\pm 1^\circ\text{C}$ ,  $26.5\pm 1^\circ\text{C}$ ,  $28.5\pm 1^\circ\text{C}$ ,  $30.5\pm 1^\circ\text{C}$ , prior to the onset of somitogenesis. At each temperature zebrafish were treated in 3 different media setups (RA, DEAB, control) for a total of 12 different experimental conditions based on the varying temperature and RA concentrations. The number of somites following development were carefully analyzed and recorded within each individual embryo. This work will give further understanding of how different abiotic conditions interact in fish development.

**Name:** Dana Buckholz

**Title:** The Spiders of Heron Island: The Impacts of Location on Web Characteristics

**Faculty Advisor:** Professor Matthias Foellmer, Professor Aaron Freeman, Professor Andrea Ward and Professor Beth Christensen

**Abstract:** Many spiders use their manufactured silk to assemble webs as the primary mechanism to capture prey. Prey availability, mediated through web placement, is predicted to affect body size in spiders. The purpose of this study is to evaluate the wind effect related to the height of webs for the species *Nephila plumipes*. Observations were conducted in the spiders' natural habitat located at the Heron Island Research Station on The Great Barrier Reef, Queensland, Australia in May and June 2013. Webs were located by searching areas of Heron Island. Webs in more open areas of the research station, prone to more wind, had average web height of 147 cm while those in the more sheltered forest area, prone to less wind, had an average height of 96 cm. Females constructed webs averaging heights of 139.5 cm while males constructed webs at heights of 99.4 cm. Female *Nephila plumipes* are larger than males (sexual dimorphism) and require more food intake. Webs strategically positioned on the forest edge in areas of greater exposure to the wind, higher off the ground, will likely experience greater cross flow of air and a higher frequency of prey availability. Increased food supply offers more feeding opportunity and is expected to result in increased *Nephila plumipes* size.

**Name:** Arthur Fain

**Title:** Programming Java-based Software for Determining Period Length of a Sinusoidal Signal in Biological Systems

**Faculty Advisor:** Professor Gerald Weaver

**Abstract:** As many of us know, our lives, as well as those of nearly all living things and biological systems operate on special, biological cycles. Whether it be chemical cycles

such as the Calvin and Krebs cycles, the cell cycle found in multicellular organisms, or circadian rhythms, we can see not only the importance to the world, but also the prevalence in our every day lives. Recently, with so much unnatural discourse occurring in the days of technological manipulation, such cyclical systems that have been present and running smoothly and naturally for thousands of years are becoming increasingly affected, leading to both unpredictable and often undesirable changes. Because of this, it is as important as ever to understand their very mechanisms in order to eventually mitigate the negative impacts that today's society has on them. This is much easier said than done however, as biological cycles such as these are complex, and to be able to fully understand such processes, it is important to study each of the individual members that play roles in them. In order to do so, there must be to be a way to quantify these cycles and trace their observed parameters in order to examine what roles the individual parts play. One of these many parameters, the period length of a cycle, is a very powerful indicator of how such cycles may function in a larger system, and moreover, a signal for its study is relatively simple to obtain. Naturally, cycles operate on the backbone of sinusoidal waves. However, because such studies are "biological" in nature, it is often very hard to find patterns or hints of sinusoids in data collected for such studies. Although many approaches exist for doing this, they operate on what I believe to be overly complicated principles, either taking many man-hours, or returning erroneous results. I believe I have written my own program for this application, priding itself in efficiency, ease of interface, and most importantly accuracy.

**Name:** Frances Fan

**Title:** Rapamycin as a potential treatment for succinate dehydrogenase mutants in *Drosophila melanogaster*

**Faculty Advisor:** Professor Eugenia Villa-Cuesta

**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. Treatments for mitochondrial disorders are currently based on a combination of vitamins and diet supplements, and are only partially effective.

*Drosophila melanogaster* is an ideal model system for the study of genetic mitochondrial disease since there are multiple mutations in genes that codify for mitochondrial proteins, such as succinate dehydrogenase (SDH). SDH is a tetrameric enzyme involved in both Krebs cycle and electron transport chain. In *D. melanogaster* mutations affecting SDH contribute to degenerative disorders.

Preliminary data in our laboratory showed that the drug rapamycin increases mitochondrial physiology and SDH activity in wild type flies. Here we test the hypothesis that rapamycin protects from SDH deficiency pathology in *D. melanogaster*. We use three different mutant strains for subunit B of SDH of *D. melanogaster* (dSdhB). The climbing abilities, SDH enzymatic activity, and ROS production are measured to determine the effect of rapamycin on SdhB deficiency. 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:** Tamanna Gandhi

**Title:** Investigating Sequence Variation in the Intellectin-1 Gene

**Faculty Advisor:** Professor Aram Stump

**Abstract:** Intellectin-1 is a protein that is found in humans and is encoded by the ITLN-1 gene. Studies have shown that Intelctin-1 may play a role in obesity, diabetes, bone density, coronary artery disease, and pulmonary diseases. Sequence variation at the intellectin-1 gene, therefore, may underlie genetic variability in the susceptibility to getting these diseases. In our research, we are sequencing coding regions of the Intellectin-1 gene for 100 human samples from human populations across the globe. These regions of the gene are being amplified by PCR and sequenced in order to identify polymorphic sites in the gene. This is being used to characterize the geographic distribution of variation in the Intellectin-1 gene, and will also be used to investigate the recent evolutionary history of this gene.

**Name:** Stephanie Monroe

**Title:** The Examination of the Use of Push-points During Aquatic and Terrestrial Locomotion in Elongate Fishes

**Faculty Advisor:** Professor Andrea Ward

**Abstract:** The study of aquatic organisms, specifically elongate fishes, that can also perform locomotion on land has often presented interesting points on how the organism is able to move. Furthermore, it poses the question of what physiologically allows this organism to propel itself forward. There are often quite different mechanisms for locomotion in different mediums. For example, the subjects of this study, the *Erpetoichthys calabaricus* and the *Polypterus senegalus* are thought to be able to propel themselves using only their body in an aquatic environment, but in a terrestrial environment need push points in order to move. This study tests this hypothesis by using a series of experiments using a pegboard at different spacings in order to measure exactly what percentage of the body is being used when moving aquatically versus moving terrestrially. The different spacings of the pegs allow us to measure the ability of the fish to take advantage of the push points available to them. These results will help to identify locomotory transitions that are necessary for terrestrial locomotion.

**Name:** Lauren Tesoriero

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

**Faculty Advisor:** Professor Aram Stump

**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. The program MSAT COMMANDER was used to locate microsatellite repeats within these sequences, and primers were designed to amplify ten microsatellite loci by PCR. Successful amplification of all ten loci has been

demonstrated, and fluorescent primers are being used to genotype individual spiders at six of these loci using a capillary genetic analyzer. Results are being analyzed using Peak Scanner software. Successful development of polymorphic microsatellite loci will facilitate various lines of ecological research on this interesting species.

**Name:** Samantha Zukowski

**Title:** 19F-NMR as a Reaction Monitor of 7-methoxy-4-trifluoromethylcoumarin Conversion to 7-hydroxy-4-trifluoromethylcoumarin by CYP19A1

**Faculty Advisor:** Professor Melissa Van Alstine-Parris

**Abstract:** Cytochrome P450s, CYPs, are a class of enzymes that catalyze the metabolism of exogenous and endogenous substances. CYP19A1, also known as aromatase, converts androgens into estrogens. This trait means a great deal to individuals with estrogen-dependent cancers and is why there is huge attention at tracking inhibitors of this enzyme. 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 (RFU) data obtained from different concentrations of HFC can be used to create a standard curve. The slope of the standard curves developed can then be used to gauge how much product has been formed. Some cons to using this method of tracking enzyme activity include the fact that some solvents have the ability to fluoresce and may interfere with RFU values of the compound being studied. NMR spectroscopy is also used for assays and since MFC and HFC contain fluorine, 19F-NMR may also be used to monitor the same reaction, without interference from solvents used. This research involves developing an enzyme assay with NMR standard curves that can be used as a new method to track CYP19A1's reaction, as well as determining if one method is more efficient or more accurate than the other. The goal is to develop a standard curve for HFC using 19F-NMR at feasible concentrations based on MFC's 25 uM  $K_M$  value, perform assays to monitor enzyme activity, and compare those results with an assay performed using fluorescence spectroscopy. 19F-NMR spectra have determined that HFC and MFC are at chemical shifts with a clearly observable range of ppm between them- 64.37 ppm and 64.64 ppm respectively. Therefore, the formation of HFC can be monitored. With a robust assay in place, compound libraries could be screened for inhibitors of CYP19A1, perhaps providing a new frontline of attack towards estrogen-dependent cancers.

## **Poster Presentation**

### **Graduate**

#### **B30**

**Name:** Shu Chen

**Title:** VHL and PKC iota Cancer Research

**Faculty Advisor:** Professor Alan Schoenfeld

**Abstract:** The Von Hippel-Lindau (VHL) disease is caused by inherited mutations that inactivate the VHL tumor suppressor gene. The product of VHL (pVHL) is coded by VHL gene. One of the proteins that binds to pVHL is atypical protein kinase C (aPKC). There are two types of aPKC, and one is PKC iota. To understand the relationship

between PKC iota and VHL, through retroviral transfection, we expressed wild-type PKC iota or kinase-inactive PKC iota into 786-O cells, a human kidney carcinoma cell line. This was performed in cells both with and without the VHL gene added back. We selected the 786-O cells parental (without VHL) cells and 786-O VHL+ cells (with VHL) that were resistant to G418 (Geneticin). We did western blots to test cellular expression levels of PKC iota and then for various markers of VHL function. Western blot analysis showed an increase in cyclin D1 for 786-O parental PKC iota cells when compared to the 786-O VHL+ PKC iota cells. Western blot analysis for integrin expression level showed an increase in  $\alpha 5$  integrin expression level due to wild-type PKC iota expression in 786-O parental cells compared to the control and kinase-inactive in the parental cells;  $\beta 1$  integrin showed an higher expression level in wild-type PKC iota VHL+ cells than the control VHL+ cells. These results support the idea that PKC iota activity blocks some of the effects that VHL has on cells, but promotes differentiation when VHL is not present.

### **B31**

**Name:** Angel Selvaral

**Title:** Effectiveness of Gerson's Therapy and Misconceptions

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** This research is about the infamous therapy for cancer called "Gerson's Therapy". Gerson's Therapy is a complex regimen that has been used to treat cancer patients; it follows a strict diet, dietary supplements, and enemas, using a holistic approach to treat cancer. Gerson's therapies' approach to cure is by removing toxins from the body, boosting the immune system, and replacing excess salt in the body's cells with potassium. This research aims at finding the effectiveness of Gerson's therapy on cancer patients, and whether this holistic approach should be considered to treat cancer in the medical practice today. This research looks at the history, politics, research, documentaries, stories, clinical trials and recent trends about the use of Gerson's therapy for cancer. It looks at the opinions of physicians, practitioners and therapists around the world about the therapy and whether they would recommend or not recommend it and why? It aims to reduce biased opinions.

### **B32**

**Name:** Carolyn Trietsch, Braulio De Assis

**Title:** Advances in Arthropod Behavior

**Faculty Advisor:** Professor Matthias Foellmer

**Abstract:** Research on the adaptive significance of arthropod behaviors has contributed fundamental insights into the evolutionary dynamics of key processes such as sexual conflict, sperm competition, and mate choice. Here we present the results of a novel study adding to our understanding of behavior evolution in arthropods.

### **B33**

**Name:** Nicole Wong, Laxminarasimha Donthireddy, Sathyapriya Babu

**Title:** Differential effect of High Fat Diet on tissue morphology and hormonal levels in male and female mice

**Faculty Advisor:** Professor Tandra R. Chakraborty

**Abstract:** The pathology of obesity produces many diseases. It has a far ranging negative effect on health including some types of cancers, non-alcoholic fatty liver disease (NAFLD), diabetes and many other diseases that are related with obesity. This project was undertaken to observe the differences in the tissue morphology (liver, pancreas, adipose, heart, brain, kidney, spleen, ovaries and testes) in male and female mice when exposed to high fat diet for a period of 6 months. Within 3 months animals in VHFD showed signs of NAFLD and with longer treatment the liver showed deposition of lipid droplets in hepatocytes, which leads to non-alcoholic steatohepatitis (NASH) subsequently cirrhosis and hepatocellular carcinoma. Morphometric analyses of pancreas showed robust signs of inflammation, increase in pancreatic islets size and number in both obese male and female. Adipose tissue showed signs of hypertrophy than hyperplasia. The effect of high fat was more pronounced in males than females. Obesity-associated hyperleptinemia and hyperinsulinemia was observed in both males and female. Thus, these results suggest that high fat diet not only affects adiposity and hormonal imbalance but changes the cellularity and morphology of the tissue to such an extent that can lead to diseases that are fatal affecting men more than women.

## **Poster Presentation Undergraduate**

### **B1**

**Name:** Jennifer Babayev, Avelina Svititskaya

**Title:** The effects of green coffee bean extract on the fecundity of female *Drosophila melanogaster*

**Faculty Advisor:** Professor Eugenia Villa-Cuesta

**Abstract:** In a society which promotes a “skinny” image, weight loss supplements have become new phenomena amongst consumers. More specifically, green coffee bean extracts are one of the more popular weight loss supplements because of their acclaimed natural ingredients, in addition to containing high concentrations of caffeine and chlorogenic acids, which is claimed to reduce visceral fat and body weight (Aitani, et al., 2006). However, because the Federal Drug Association does not regulate food supplements, there are unknown potential side effects that may occur to weight-conscious consumers. The purpose of this experiment was to determine whether green coffee bean extract would affect the fecundity levels of female *Drosophila melanogaster*. Females were fed green coffee bean extract for a few days and then mated with untreated males for two weeks. It was concluded that there is no significant difference in the amount of hatched offspring between green coffee treated and untreated parents. This leads us to infer that the weight loss supplement may not have an effect in humans regarding fecundity, however further experimentation must be done in order to ensure the validity of these results.

### **B2**

**Name:** Sarah Cinquemani

**Title:** Use of the eastern mud snail (*Ilyanassa obsoleta*) as a bioindicator of localized metal contamination

**Faculty Advisor:** Professor Jessica Dutton

**Abstract:** This study investigated the use of the eastern mud snail (*Ilyanassa obsoleta*) as a bioindicator of localized metal contamination at several locations in the Hempstead Bays and South Oyster Bay on the south shore of Long Island, NY. The eastern mud snail is a residential detritus feeder which has been shown to accumulate metals to high concentration. The bays on the south shore of Long Island are contaminated with metals due to anthropogenic activities, including industrial practices, sewage treatment plants, and boating practices. Furthermore, the bays are poorly flushed due to their limited connection to the Atlantic Ocean. The objective of this study was to investigate the concentration of two essential elements (Cu, Zn) and four non-essential elements (As, Cd, Hg, and Pb) in the soft tissue of eastern mud snails collected from eight locations within the bays (east and west side of Bay County Park, Oceanside Park, Baldwin Park, Cow Meadow Park, west end of Jones Beach, Zachs Bay, and Tobay) using Inductively Coupled Plasma Mass Spectrometry (ICP-MS). The concentration of each metal in the soft tissue was compared between field sites, and concentration factors were calculated on a site-specific basis to investigate how much more enriched the mud snails were in each metal compared to the seawater and sediment. The findings of this research provide a better understanding of the health of the estuarine ecosystem on the south shore of Long Island.

### **B3**

**Name:** Luke Cotellessa, Ana Galesic

**Title:** Purification and Characterization of <sup>15</sup>N-labeled *Desulfovibrio desulfuricans* Flavodoxin in the Presence and Absence of Macromolecular Crowding Agents Using 2D and 3D <sup>1</sup>H-<sup>15</sup>N NMR Spectroscopy

**Faculty Advisor:** Professor Brian J. Stockman

**Abstract:** Protein structure and function are usually characterized using dilute aqueous buffered solutions. However, proteins have evolved to function in the crowded environment of the cell. Characterizing protein structure and function in conditions that mimic crowded conditions may thus provide information that more accurately reflects physical conditions. Ficoll 70 is a long chain polysaccharide that can be used as a crowding agent to mimic crowded cell conditions. The objective of this research was to define the influence of the crowding agent on the structure of *Desulfovibrio desulfuricans* flavodoxin using heteronuclear 2D and 3D <sup>1</sup>H-<sup>15</sup>N NMR spectroscopy. Flavodoxin is an electron transfer protein containing 148 amino acids with a molecular weight of 16 kD. Preparation of <sup>15</sup>N-labeled *D. desulfuricans* flavodoxin was carried out using an *E. coli* expression system and <sup>15</sup>N-labeled media. Flavodoxin was purified using two FPLC columns, a Uno Q anion exchange followed by a Sephadex gel filtration. 2D and 3D <sup>1</sup>H-<sup>15</sup>N NMR spectroscopy were then used to characterize the protein structure. Ficoll-induced changes in <sup>1</sup>H and <sup>15</sup>N chemical shifts were minimal. However, the addition of Ficoll caused substantial broadening of a number of resonances. These observations are in contrast to similar studies carried out on the related flavodoxin from *D. vulgaris*. While observed resonances in both proteins experience the same general broadening in the presence of Ficoll, a significant number of *D. desulfuricans* flavodoxin resonances disappear in the presence of Ficoll. The disappearance of a subset of resonances observed in the presence of Ficoll is indicative of the induced conformational changes rather than

aggregation. Ficoll-induced chemical shift and line width changes will be interpreted with respect to the corresponding locations of these residues in the tertiary structure to define residue-specific conformational changes and to propose functional implications.

#### **B4**

**Name:** Kaitlyn DeStefano, Sarah Cinquemani  
Erin Carey, Benjamin Nichols

**Title:** Organic matter found in sea cucumber feces in relation to coral location

**Faculty Advisor:** Professor Beth Christensen, Professor Matthias Foellmer, Professor Aaren Freeman, Professor Andrea Ward

**Abstract:** This study examined the contents of sea cucumber feces in comparison to the sediment around them in regards to the proximity to coral. The question asked was: Does proximity to coral alter the amount of organic matter found in holothuria feces when compared to the sediment near the organism? The hypothesis stated: the closer a sea cucumber is to coral, the increased chance of a high concentration of organic matter in their excrements than in the sediment around them. By taking various samples, weighing the mass after drying the sample, and then ashing the sample, the amount of organic matter in each sample was determined. With this information, we found that the more organic matter in a sediment sample positively correlated with how much organic matter was found in a sample of feces. This experiment also showed that there was no data to support the relationship between distance from coral heads and the amount of organic matter found in the sediment.

#### **B5**

**Name:** Tamanna Gandhi, Ja Hyum Kim

**Title:** Non-tobacco hookah smoke shortens the lifespan of male, wild type *Drosophila Melanogaster*

**Faculty Advisor:** Professor Eugenia Villa-Cuesta

**Abstract:** As smoking hookah has become increasingly popular in today's society, the implications of this pastime is of great significance. Many studies have been done on the negative effects of tobacco, but very little is known about the implications of the non-tobacco substances in hookah smoke. In this study, the lifespan of male, wild type *Drosophila melanogaster* flies were observed when exposed to non-tobacco hookah smoke and compared to a control group that was not exposed to hookah smoke but had identical living conditions. Male flies were used specifically used because they have a shorter life expectancy than female flies and the wild type strain was used as the effects of the non-tobacco substances in hookah smoke without mutation and under normal conditions was being investigated. The results were analyzed statistically using SPSS Kaplan-Meier Log Rank Data Analysis and a survival curve was generated to display the results. It was found that the lifespan of the experimental flies that were exposed to non-tobacco hookah smoke was significantly shorter than that of the control group that was not exposed to the smoke.

#### **B6**

**Name:** Natalia Gmuca

**Title:** The Fat and the Furriest: Morphological changes in harp seal fur with ontogeny

**Faculty Advisor:** Professor Heather Liwanag

**Abstract:** For mammals in polar regions, the extreme cold of the environment presents a constant challenge to thermal homeostasis. The harp seal (*Pagophilus groenlandicus*) is a true 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 examined how the morphological characteristics of harp seal fur change as the animals age. We compared hair length, hair circularity, and hair density for neonates (1 day old, N=7), thin whitecoats (4 days old, N=3), fat whitecoats (9 days old, N=4), newly weaned pups (2 weeks old, N=5), molted pups (3 weeks old, N=4), and adult harp seals (N=4).

## **B7**

**Name:** Jee Sun Kim

**Title:** Reflections of Dental Health at Medieval Polystylon: Contributions of Forensic Odontology

**Faculty Advisor:** Professor Anagnostis Agelarakis

**Abstract:** This paper offers anthropologic insights focusing on forensic odontology, regarding two medieval populations recovered from the burial grounds of Polystylon-Abdera in Western Thrace of Greece. From the anthropologic analysis conducted in 1982, a sample of jaws and teeth from the 6th-9th and 12th-13th centuries had been selectively retained. The objectives of the project were to provide non-inspectional/macrosopic lines of evidence relative to acquired, degenerative, and pathological changes of dentitions documented in the field. Initial dental anthropologic assessments had indicated a variability of ante mortem dental hygiene status, showing a higher level of alveolar bone and dental surfaces' care exercised among female individuals compared to males. Further, the males had shown a greater prevalence to dental paleopathologic manifestations and a higher diversity of incisal surfaces' modification. Subsequent to 1982, isotopic fractionation analyses revealed that the diets had mainly involved C3 photosynthesizing pathway staples, such as wheat and barley. Hence, chemical analyses supported in-field suggestions that starch-rich components had contributed to cariogenic pathogenicity that affected dental root and cemento-enamel junction loci, resulting in calculus deposits on supra/infra-gingival surfaces. Dental anthropology laboratory analyses conducted on the retained sample of maxillo-mandibular alveolar processes and 1,010 preserved dental surfaces elucidated aspects of the human condition. Corroborating in-field recordings, the results of this research provide hypotheses regarding early life stress conditions of arrested and improved biological growth instances, sustained with a greater incidence ratio by sub-adult female individuals compared to the morbidity and survivorship potential of males; alluding to characteristic of sociocultural conditions that permanently marked the post-subadult osseous and dental record of the two population samples involved.

## **B8**

**Name:** Denis Krasilnikov, Halvor Adams, Gaetana Catania, Gisha Varghese

**Title:** Advances in Arthropod Behavior

**Faculty Advisor:** Professor Matthias Foellmer

**Abstract:** Research on the adaptive significance of arthropod behaviors has contributed fundamental insights into the evolutionary dynamics of key processes such as sexual conflict, sperm competition, and mate choice. Here we present the results of a novel study adding to our understanding of behavior evolution in arthropods.

## **B9**

**Name:** Ammie Lin, Afrain Bobby

**Title:** Exposure to Chronic Noxious Heat during Early Development Causes *Drosophila melanogaster* to Gain Resistance to Noxious Heat and Pain

**Faculty Advisor:** Professor Eugenia Villa-Cuesta

**Abstract:** *Drosophila melanogaster*, more commonly known as a fruit fly, “is one of the most studied organisms in biological research” (Conn, 2006). Studies have shown that *Drosophila* have the ability to sense pain (Tracey, Wilson, Laurent, & Benzer, 2003). Yet, researchers continue to perform experiments on *Drosophila*, as well as other species, disregarding the species’ ability to sense painful stimuli as subjects of research.

In this experiment, it was hypothesized that if *Drosophila* are exposed to chronic noxious heat during early developmental stages, then they will gain resistance to noxious heat and pain. Noxious heat is 39°C to 41°C, which has been shown to be a painful stimulus for *Drosophila* (Tracey et al., 2003).

*Drosophila* were exposed to 30 minutes of noxious heat twice: first, when they were eggs and second, when they were larvae. Then, a noxious heat sensitivity assay and a touch-sensitivity assay were conducted. The results supported the hypothesis: *Drosophila* that had been exposed to chronic noxious heat responded to the noxious heat sensitivity assay much more vigorously than the *Drosophila* that had not been exposed to chronic noxious heat. This suggests that *Drosophila* can gain resistance to noxious heat and pain after chronic exposure to noxious heat during early development. Further studies should focus on understanding *Drosophila*’s pain threshold to improve the ethical climate in future biological research.

## **B10**

**Name:** Lindsey Narine, Aliza Aziz

**Title:** Energy drinks and their immediate and short-term effects on the mobility of *Drosophila melanogaster*

**Faculty Advisor:** Professor Eugenia Villa-Cuesta

**Abstract:** *Drosophila melanogaster* has long served as the model organism for scientific experiments. In this experiment the effect of various energy drinks was tested on this organism. It was found that energy drinks did indeed cause an energy boost, but at the same time also led to decreased physical activity of the flies in the long run. Flies not exposed to drinks showed a more consistent performance overall.

## **B11**

**Name:** Fatime Qosaj

**Title:** The Effects of Atypical PKC on the Differentiation of Kidney Cells



**Faculty Advisor:** Professor Alan Schoenfeld

**Abstract:** Von Hippel-Lindau (VHL) is a tumor suppressor gene that produces a protein, pVHL, which functions to bind to a target protein, HIF- $\alpha$ , and then destroy it under oxygenic conditions. HIF- $\alpha$ , or Hypoxia Inducible Factor, is an oxygen-dependent transcription factor inhibited by VHL, leading to tumor suppression. A mutant VHL gene causes HIF- $\alpha$  to accumulate, inducing activation of various genes that can promote cancer. Harmful effects include renal cell carcinoma, haemangioblastomas, and most important to this study, kidney cancer. pVHL functions by covalently binding an ubiquitin molecule (76 amino acid compound) to a specific target protein attached to the VHL gene. As a result, an ubiquitin E3 ligase complex forms. Once this complex is formed, the cells signal the target to go to the proteasome where the target protein degrades. When VHL functions regularly, an insignificant amount of HIF- $\alpha$  is present in the cell and tumors are suppressed. Subsequently, VHL has the potential to prevent cancer by preventing growth factors produced by HIF- $\alpha$ . While some of the pVHL's properties may be due to regulation of HIF- $\alpha$ , there may be additional functions of pVHL. pVHL has also been shown to bind to atypical protein kinase C (PKC). The target protein studied in this experiment, atypical PKC, has been hypothesized to play a cooperative role with VHL, instead of the antagonistic role apparent in the HIF- $\alpha$  protein. An RNA interference technique was conducted on the different kidney cells lines. In this process, we have attempted to silence endogenous atypical PKC levels in the cells lines by infection of retroviruses coding for short hairpin RNA targeting PKC zeta and iota (isoforms of atypical PKC). This procedure was done in RCC10 renal cells that either lack VHL or have VHL reintroduced. Using these cells, it will be possible to understand if lowering the levels of atypical PKC would hinder or help VHL with regards to phenotypic changes in kidney cell differentiation.

## **B12**

**Name:** Fatime Qosaj, Bryan Castillo

**Title:** Spicing it up in the Mitochondria: Antioxidant ability of curcumin to increase resistance to ROS buildup in succinate dehydrogenase deficiency

**Faculty Advisor:** Professor Eugenia Villa-Cuesta

**Abstract:** Modern society is currently on the hunt for wonder foods that have the potential to prevent and treat diseases and illnesses. One such wonder food is curcumin, the main ingredient in the Indian spice called turmeric. As a potent antioxidant, curcumin has shown to improve illnesses due to a buildup of reactive oxygen species (ROS) or toxic byproducts produced via mitochondrial energy-producing reactions. The goal of this study is to see if curcumin is able to build resistance to ROS in *D. melanogaster*, *sdhB* strain fruit flies, which exhibit the mitochondrial disease, succinate dehydrogenase deficiency. This disease, characterized by detrimental levels of ROS, is due to a defective enzyme of Complex II in the energy producing electron transport chain of the mitochondria. We hypothesize that curcumin will increase *sdhB* resistance to ROS, thereby reversing the mitochondrial disease. Flies were initially exposed to either a curcumin or non-curcumin diet; survivability of the flies was studied after both groups of flies were exposed to hydrogen peroxide, a ROS. Results indicate no significant difference between the two treatments. Therefore, it is concluded that curcumin is not a

strong enough antioxidant to treat *sdhB* flies; this may be due to irreversible damage of the disease or low curcumin bioavailability.

### **B13**

**Name:** Andres Rodriguez

**Title:** Comparison of Nickel and Cobalt for the use of “Green” Chemistry in the Purification of Uridine Nucleoside Hydrolase

**Faculty Advisor:** Professor David Parkin

**Abstract:** The parasite known as *Trichomonas vaginalis* is responsible for the sexually transmitted disease called trichomoniasis. The parasite produces an enzyme known as uridine nucleoside hydrolase (UNH) which is not found within its hosts. The goal of this research is to isolate and characterize this enzyme in order to either find a better form of treatment or a faster method of diagnosis for the disease. To obtain the enzyme for study it is expressed within *E. coli* cells, afterwards the cells are broken by sonication then the cell debris is spun down by centrifugation. The enzyme is then isolated and purified by the use of a metal chelating column and then a molecular weight column. The current method of purification uses nickel as the metal for the chelating column. Nickel is a heavy metal that is hazardous for the environment as inhalation or ingestion of it or of nickel compounds can result in nickel poisoning. In order to employ a method of “green” chemistry it is proposed that the nickel column can be replaced with a cobalt one. Cobalt is a less hazardous metal than nickel since it is the active center of coenzymes in the body such as vitamin B12.

### **B14**

**Name:** Roger Sanguino

**Title:** Rapamycin’s Effect on the Metabolic Rate of wild type *Drosophila melanogaster*

**Faculty Advisor:** Professor Eugenia Villa-Cuesta, Professor Heather Liwanag

**Abstract:** Dietary rapamycin treatment plausibly has the ability to both promote health and lengthen life span in mammals and invertebrates. Recent experiments have shown that the beneficial effect of rapamycin might be mediated by changes in mitochondrial metabolism that improve mitochondrial performance. It is known that rapamycin affects mitochondrial metabolism. Therefore, in this study we want to address the effect of rapamycin in whole animal metabolic rate. The experiment conducted studied the effect of two hundred micro molar rapamycin added to the normal diet of female *Drosophila*, which were subsequently exposed to the rapamycin treatment for one, three, six and ten day intervals.

The data indicated that in longer exposure to rapamycin, oxygen consumption decreases significantly, mimicking conditions of starvation. Since previous studies showed that free fatty acids were less abundant during longer exposure to rapamycin, we hypothesize that our data can be explained by a lack of lipid availability for metabolization at that time point.

Our results further corroborate previous findings that rapamycin has an effect on mitochondrial metabolic pathways. Previous studies have also shown that rapamycin treatment is most successful when the amount of nutrition available to the model system is abundant. Therefore future experiments can analyze the metabolic rate of flies exposed to rapamycin on different dietary conditions. Overall this project will help build an

understanding of the best circumstances for rapamycin treatment in order to increase health span.

### **B15**

**Name:** Neha Sharma

**Title:** How Low Can They Go? Factors Affecting Dive Depth in Fur Seals and Sea Lions

**Faculty Advisor:** Professor Heather Liwanag

**Abstract:** The family Otariidae (eared seals) includes 15 extant species of sea lions and fur seals. Otariid species reside in subpolar, temperate, and equatorial waters, and have a semiaquatic lifestyle in which they forage and migrate in the water but breed and rest on land. This study compared diving behavior (average and maximum dive depth), dive capacity (aerobic dive limit, ADL), foraging strategy (epipelagic, mesopelagic, benthic), and morphology (body mass and insulation type) among species to understand the factors driving differences in diving. Larger animals have a greater dive capability (ADL) due to a greater capacity for blood oxygen storage. Sea lions, which use blubber for insulation, generally dive deeper than fur seals, which instead rely on fur. However, the relationship between foraging strategy and dive behavior is more complicated, due to intraspecific differences in foraging. Overall, we found that dive behavior is influenced to a large extent by insulation type, which may have implications for the transition from fur to blubber within the otariid family.

### **B16**

**Name:** Tara Shea, Paola J. Burburan, Vivian N. Matubia, Sandy S. Ramcharan, Irving Rosario Jr.

**Title:** Identification of proton-pump inhibitor drugs that inhibit *Trichomonas vaginalis* uridine nucleoside ribohydrolase using an <sup>19</sup>F NMR-based activity assay

**Faculty Advisor:** Professor Brian J. Stockman

**Abstract:** Trichomoniasis is the most prevalent non-viral sexually transmitted disease, with increasing resistance to existing therapies underscoring the need for novel antitrichomonal agents. The causative agent is the parasitic protozoan *Trichomonas vaginalis*, an obligate parasite that must scavenge host cell nucleosides to obtain its nucleobases via salvage pathway enzymes. One such enzyme is uridine nucleoside ribohydrolase (UNH), a fundamental constituent in the uridine salvage pathway. After the  $K_m$  value for 5-fluorouridine was determined to be 15  $\mu\text{M}$ , an <sup>19</sup>F NMR-based activity assay was developed to monitor the UNH-catalyzed conversion of 5-fluorouridine to 5-fluorouracil. The NIH Clinical Collection and NIH Clinical Collection 2 were then screened in a compressed format. A total of 23 out of 573 compounds tested exhibited significant inhibition at 50  $\mu\text{M}$  including the proton-pump inhibiting drugs omeprazole, pantoprazole, and rabeprazole. Dose-response curves using fresh solutions made from commercially-sourced solid compounds confirmed NMR  $\text{IC}_{50}$  values less than 10  $\mu\text{M}$ .

### **B29**

**Name:** Monika Siepsiak

**Title:** Synthesis of 3-(1-methyl-1H-imidazol-4-yl)propan-1-amine; an intermediate in the preparation of a N-methyl improgan

**Faculty Advisor:** Professor Melissa Van Alstine-Parris

**Abstract:** Improgan is a chemically synthesized drug which appears to be a powerful pain reliever without the side effects of morphine. The drug has only been administered through injections into the brain of laboratory animals due to the fact that it does not cross the blood brain barrier. The goal of this research is to synthesize a methylated derivative of improgan in order to try to improve its blood brain barrier penetration. Replacing the NH on the imidazole ring of improgan with an N-methyl group will decrease the amount of hydrogen bond donors, hopefully allowing it to cross the blood brain barrier. Currently, the intermediate ethyl 3-(1-methyl-1H-imidazol-4-yl)propanoate has been successfully synthesized from urocanic acid through the reduction of the alkene, esterification of the carboxylic acid and N-methylation of the imidazole ring. The presence of the compound has been confirmed using NMR spectroscopy. Future work will involve a reduction of the ester and a Gabriel synthesis of the primary amine.

## **B17**

**Name:** Erin Taub

**Title:** The Effect of Environmental Pollutant Malathion

**Faculty Advisor:** Professor Aaren Freeman

**Abstract:** Long Island shore crabs are often exposed to environmental pollutants, such as pesticides. Pesticides are toxic chemicals that can affect water quality and harm non-target organisms and they are the only known chemicals that are introduced into the environment intentionally. Malathion, an insecticide targeting arthropods (insects), can enter the estuarine systems through over spraying and runoffs and has been shown to have an effect on crustaceans' ability to forage and their ability to avoid predators, as well as cause death. Malathion is a neurotoxic agent designed to irreversibly inactivate acetylcholinesterase causing an accumulation of acetylcholine. The toxicity of malathion depends on exposure time, temperature, pH, and the species. The species used in this study are *Panopeus herbstii*, *Eurypanopeus depressus* and *Hemigrapsus sanguineus*. *H. sanguineus* is the only invasive species used in the experiments, the rest are native to Long Island shores. *H. sanguineus* is native to Chinese, Japanese, and Korean coasts. The most probable means of invasion is from ballast water from ocean going vessels. This study has found that malathion does effect the native species of crabs and it promotes the invasion of *H. sanguineus*. *H. sanguineus* are very tolerant to malathion, having almost no effect on their mortality or behavior. The native species have an increased righting time compared to *H. sanguineus* with a significant p-value of .0001. This means that the native crab species are unable to forage and avoid predators, giving *H. sanguineus* greater ability to invade causing a further decline in the biodiversity.

## **B18**

**Name:** Vittoria Venuti, Maria Vessia

**Title:** Chitons: Their size and distribution along the north (leeward) and south (windward) sides of Heron Island, Queensland, Australia

**Faculty Advisor:** Professor Beth Christensen, Professor Aaren Freeman, Professor Andrea Ward, Professor Matthias Foellmer

**Abstract:** Chitons are fully marine gastropods commonly found on beach rocks. They were observed living within holes along shaded sides of rocks. We measured chitons on either side along a 50m transect. We then sought to determine if there was any correlation

between size and location, which there was not. However, there was a significant correlation between hole depth and chiton size. This is likely due to available space within their hole.

## **B19**

**Name:** Vittoria Venuti

**Title:** Interspecific comparisons of metal bioaccumulation in tuna and mahi-mahi as a function of size

**Faculty Advisor:** Professor Jessica Dutton

**Abstract:** Tuna and dolphinfish (mahi-mahi) are pelagic predatory fish and are a popular food source for humans. Prior studies have shown that fish predominantly accumulate metals from their diet and can have an elevated body burden of metals as a result, especially Hg. Most metals bioaccumulate in fish, so longer, older fish have a higher body burden of each metal than smaller, younger fish; this is a result of the rate of metal uptake into the body being greater than the rate of metal loss from the body. The objective of this study was to investigate the concentration of two essential metals (Cu, Zn) and four non-essential metals (As, Cd, Hg, Pb) in the muscle tissue of four species of tuna (albacore, *Thunnus alalunga*; bigeye, *Thunnus obesus*; bluefin, *Thunnus thynnus*; and yellowfin, *Thunnus albacares*) and mahi-mahi (*Coryphaena hippurus*) as a function of size using Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Samples were collected from tuna fishing competitions held on the south shore of Long Island, NY, during August 2013 and the fish were caught 80 to 100 miles offshore. The samples are still being analyzed, but the results will show interspecies variability in the concentration of each metal, and the relationship between metal concentration in muscle tissue and fork length of the fish. The findings of this study will further aid in our understanding of the health of the marine ecosystem, and since tuna and mahi-mahi are a popular seafood choice, this study will help determine how much metal people are exposed to from consuming these locally caught fish, and whether these species are safe for human consumption.

## **B20**

**Name:** Maria Vessia

**Title:** Metal bioaccumulation in Atlantic silversides (*Menidia menidia*) as a function of size

**Faculty Advisor:** Professor Jessica Dutton

**Abstract:** The Hempstead Bays on the south shore of Long Island are contaminated with metals due to anthropogenic activities. In addition, the bays are poorly flushed due to their limited connection to the Atlantic Ocean. As a result, elevated concentrations of metals have been recorded in the water, sediment, and biota. Understanding metal bioaccumulation in small forage fish is important for the health of the fish themselves, their predators, and ultimately human consumers of contaminated seafood. Most metals bioaccumulate in fish, because the rate of metal uptake into the fish is greater than the rate of metal loss from the fish. This means that larger, older fish have a higher body burden of metals than smaller, younger fish. The Atlantic silverside (*Menidia menidia*) is a small forage fish found in estuaries, bays, and salt marshes along the east coast of North America, and has been used as a model organism to investigate metal bioaccumulation in

fish. The objective of this study was to investigate the concentration of two essential metals (Cu, Zn) and four non-essential metals (As, Cd, Hg, Pb) in Atlantic silversides collected from three locations in the Hempstead Bays (Bay County Park, Cow Meadow Park, and the west end of Jones Beach) as a function of size. The samples are still being analyzed, but the results will show the relationship between the concentration of each metal in the fish and fork length of the fish on a site-specific basis. Prior studies have shown that the gills are the main uptake site for aqueous metals and the intestine is the main uptake site for dietary metals. This study also investigated how the percentage of total body weight comprised of the gills and viscera changed with an increase in body length, which will influence the surface area available for metal uptake. The Atlantic silverside is not a commercially valuable species, but it is a conduit for the transfer of metals between lower trophic levels and its predators.

**Multidisciplinary  
Oral Presentation  
Undergraduate**

**Name:** Susanna Novick

**Title:** Non-renewable Resources and Development in Africa: A Blessing or a Curse?

**Faculty Advisor:** Professor Francesco Bastagli

**Abstract:** For many generations the affluent have industrialized and profited greatly through the exploitation and extraction of the resources of the poor and developing countries. They used their resources to become stronger, richer, and more powerful while depleting the resources of the poor and their chances of development. Through methods of intimidation, occupation, imperialism, and force, affluent states and a small number of private companies have benefited and continue to benefit from the exploitation of these resources and their people, while the public revenues of these nations remain small or misused. Because of this, the people remain entrenched in continuous cycles of extreme systematic poverty often lacking even the most basic resources such as clean drinking water, medical care, and the availability of electricity, education and basic infrastructure.

Although having large amounts of natural resources has generally been regarded as a blessing, in many nations it has become a curse attracting civil wars, corruption, and mass bloodshed. Throughout this presentation, I seek to explore effective measures for addressing the issue of illegal exploitation of natural resources in the context of conflict prevention, resolution and management including the role of global governance both politically, economically, and corporately combined with effective regional and national frameworks to address several of the major underlying issues that lead to exploitation and the illicit extraction of natural resources.

**Name:** Catherine Rudell

**Title:** Adderall: A "Performance Enhancing Drug" For Your Brain?

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** I propose to do research on the usage of the prescription drug, Adderall, among people who are not diagnosed with Attention Deficit Disorder. Adderall has

become popular among healthy college students who want to get a leg up in school because the drug supposedly improves their focus and memory. For this research project, I would like to examine the ethics of the usage of Adderall among non-prescribed students. For example, it is considered cheating in the sports world for a sports player to take steroids to enhance his/her performance on the field. Similarly, would it be considered "cheating" for a non-diagnosed person to take Adderall to enhance his/her performance on tests? In order to perform this research I would like to create an anonymous survey containing questions about peoples' familiarity with Adderall and their opinions on the ethics of its usage. The main people I would like to survey are college students because they make up the majority of the population who use the drug recreationally. However, it may be useful to expand this survey to the public, the medical profession, the legal system, and beyond.

**Name:** Erica White

**Title:** The status of women in West Africa - a comparative study

**Faculty Advisor:** Professor Devin Thornberg, Professor Francesco Bastagli

**Abstract:** Ghana and Senegal are two emerging West African nations that share a similar economic standing and represent relative political stability in a region wracked with civil war and political distress. Ghana, which was colonized by the English and is primarily Christian, has a very different ethnic and religious profile than majority-Muslim Senegal, which was a colony of France. In my research, I intend to evaluate the status of women in these two countries, culminating in a comparative analysis. I will examine women's standing within the law of both countries, access to healthcare and education, women in the economy/labor force, etc. I will be examining policy documents, statistics from scholarly sources, and possibly looking at Ghanaian and Senegalese media outlets to see if they represent women in any particular way. The findings of the research will be assessed to identify policy options that may help improve the social and economic conditions of women in the two countries under consideration and in the West Africa region.

## **Poster Presentation**

### **Graduate**

#### **E10**

**Name:** Nicole Lesniak, Kristin Neville

**Title:** "Miss 7-11:" What does a Culturally Competent Classroom look like?

**Faculty Advisor:** Professor Diane Caracciolo

**Abstract:** The purpose of this three month qualitative case study was to determine the ways in which a teacher can design a culturally competent curriculum and classroom environment for his or her students. The case study took place in two English classrooms in a diverse suburban high school in the New York metropolitan region. The definition of culture used in this study includes perceptions about race, ethnicity, gender, sexual orientation, socioeconomic status, language and dialect (Godina 203). In addition, culturally competent instruction entails teachers' understandings of their students' race, ethnicity, gender, sexual orientation, socioeconomic status, language, dialect, learning

preferences, and educational needs. Methods used for this study included surveys, observations, field notes and interviews with students and teachers. Our goal was to see not only how high school students analyze their experience of culture, but also to examine how a teacher influences students' perceptions of their school and overall learning environment.

## **Poster Presentation Undergraduate**

### **E1**

**Name:** Ria Koukoulis, Alyssa Conigliaro

**Title:** Analysis of Van Gogh's Portraits Through Brushstrokes and Emotions

**Faculty Advisor:** Professor Susan Petry

**Abstract:** Since the time of Freud and probably before, there has been interest in the extent to which art reflects the thoughts, emotions, personality, and subconscious processes of the artist. It is clear that the psyche of the artist is a main component in the creation of a work of art. In addition, the viewer gives the work of art its own unique meaning. It's important to see how viewers interpret works of art because this can provide information about the true emotional state of the artist. Little empirical work has been done in this field in the psychology literature although studies done with projective tests, such as the Rorschach and HTP tests, show that an individual's interpretation of ambiguous stimuli can lead to the discovery of unknown information about the psyche of the artist or the individual. In the present study, the portraits and self-portraits of Vincent Van Gogh were looked at with regard to the style and function of the brush strokes used as well as the emotion expressed and its related intensity. Preliminary results suggest that Van Gogh's brushwork served one of the three primary functions: development of texture, outline of key features, and depiction of the element itself. Raters were shown high quality copies of Van Gogh's thirty six self-portraits and thirty three of his portraits and were asked to specify these brush stroke functions. They were then asked to describe what emotion was being expressed in the artwork as well as the relative intensity. Through the analysis of the style and structure of artwork along with the various emotions and intensities portrayed, one can discover valuable information about the thoughts, emotions, personality, and subconscious processes of the artist and by extension of the viewer as well.

### **E2**

**Name:** Kyle Morrison, Kaitlin Shahinian

**Title:** Maternal Birthing Mortality and the Symbolism of Burial Customs in Ancient Greece

**Faculty Advisor:** Professor Joan Valas, Professor Anagnostis Agelarakis

**Abstract:** Anthropologists, carefully digging the layers of earth that have been keeping safely the secrets of the dead, may very rarely encounter an archaeological context that reveals the specter of perimortem drama, of maternal and offspring death at the time of birthing. Interred at the Iron Age burial ground of Eleutherna site in Crete, a mother and her stillborn had been placed on Mother Earth's embrace, their bodies physically and



intimately connected for eternity; the mother's lower extremities arranged to simulate a protective vault for her breathless child.

This project, part of an interdisciplinary project, investigates the burial customs and practices in ancient Greece with a focus on the symbolism and ritual on the passing of women. Particularly this presentation evaluates and contextualizes the physical/forensic anthropological data retrieved from the recovered skeletal remains in conjunction with studies of the mortuary patterns and analysis of the "fossilized" behavior imprinted in the funerary activity area.

Aiming to better decipher and interpret the abstract meanings echoed from the associations of the burial context, a number of competing explanatory hypotheses were nullified fine-tuning our understandings of the dreaded instances by the ancient Greeks of mother infant mortality at birthing. Additionally, the origin and significance of goddesses among the ancient Greeks that were to offer support and protection during childbirth is investigated along with the heroic status designated to women that had died in childbirth as revealed by the historical record.

Furthermore, in providing for a diachronic platform of comparative research, the prevalence of mother-infant mortality at birth is investigated via ethno-historic records from rural Greek settings juxtaposed to relative American data and those provided by international agencies. This presentation is of interest to the Social and Biological Sciences, Nursing and Medicine.

### **E3**

**Name:** Sarah Rodriguez, Allison Adler, Ashley Corbeil, Katelynn Kelley, Brittany Martin, Danaleah Shoenfus, Sarah Bianchi, Megan Fong, Irene Kafkis, Amanda Paolotti, Lisa Pastore, Kaitlin Shahinian, Samantha Petrakis, Rebecca Vicioso

**Title:** Technical Drawing in Archaeology and Physical Anthropology

**Faculty Advisor:** Professor Argio Agelarakis

**Abstract:** This presentation reflects on aspects of artistic expression and an understanding depicted from the viewpoint of scientific illustration in the overlapping fields of archaeology, physical and forensic anthropology, as well as medical illustration. Student work during the Fall 2013 course "Technical Drawing in Archaeology and Physical Anthropology" represents methods and techniques learned and implemented as core principles used in the in-scale illustration and graphic documentation of organic and inorganic ecofactual materials, artifacts and components of cultural materials recovered from archaeological sites that may range from Paleolithic to recent historic contextual associations within human activity areas.

The enhancement of student skills and the offering of additional training 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.

**Nursing and Healthcare**  
**Oral Presentation**  
**Graduate**

**Name:** Kathleen Brush

**Title:** Clinical Data Interchange & Decision Support

**Faculty Advisor:** Professor Thomas Virgona

**Abstract:** In 2004, President George W. Bush touted a plan to implement electronic medicine within ten years. Currently, many healthcare organizations are further developing their clinical decision support systems, or CDSS, as well as ensuring interoperability with their electronic health record, or EHR systems and exchange with regional health centers and beyond. Some are spurred by the Health Information Technology for Economic and Clinical Health (HITECH) ACT of 2009 and its incentives for meaningful use of the EHR. Clinical decision support systems are now contained within the functional criteria for ambulatory EHRs and inpatient EHRs. They will be made even more effective when their knowledge is shared between multiple clinical sites and ambulatory practices. This will result in improved medical interventions, outcomes, patient safety, quality of care, and increased revenue for accountable-care organizations. This paper discusses how Health Level Seven, or HL7 data standards and governance such as the Health eDecisions Project (HeD) will help move the industry closer toward the end-goal of optimum quality and patient safety.

**Name:** Steven Siciliano

**Title:** Should Health Educators “Make More Noise” About Noise?

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** Research has shown that noise can have damaging effects on physical, emotional, and social health, especially on individuals who are “noise sensitive.” But is environmental noise a big enough problem to warrant increased investment in education and prevention? This project took a step towards answering that question by surveying a population of educated Americans to learn whether noise is a problem for them personally, and to gauge how much they know about noise as a public health issue. Specifically, a questionnaire was given to Adelphi University professors to find out how they cope with noise at home and what they think about noise in relation to overall wellness. The results were then analyzed with the goal of determining whether health educators should “make more noise about noise” by campaigning to raise awareness of noise as a risk factor.

**Oral Presentation**  
**Undergraduate**

**Name:** Erica Conde

**Title:** An analysis of nurse-conducted pain assessment in nonverbal patients in critical care settings: How can pain be better identified and managed in patients who cannot self-report?

**Faculty Advisor:** Professor Deborah Ambrosio

**Abstract:** Pain is used in everyday conversation. An individual may be “in pain,” may suffer “from pain,” or may “feel pain.” There can be “painful experiences” and “painful accidents.” Even though the word “pain” can be used so interchangeably, individuals seem to understand its meaning, no matter how it is used.

While the connotation of the word is understood, the context changes it slightly. Individuals gain learned experiences of pain from childhood, television, family, clinicians, etc (Pasero & McCaffery, 2011, p. 26). In a hospital setting, patients may appear to be calm, to read, or to have lively telephone conversations with family members and as soon as the clinician enters the room, patients may replace these activities with a solemn facial expression. They may even grimace, moan or restrict movement (Pasero & McCaffery, 2011, p. 26).

According to McCaffery’s universal definition of pain, "Pain is whatever the experiencing person says it is, existing whenever the experiencing person say it does" (Definition of pain, 2012, para. 1). Thus, it seems that during the assessment, a nurse must take what the patient says as the truth, without any judgment.

In all of the above instances, pain is experienced by individuals who are alert and aware. Even McCaffery’s definition of pain assumes that the person can verbally express the pain. However, in a critical care setting, patients are nonverbal due to tracheostomies, intubations, sedation, etc. How is a nurse to assess the pain, if any, in those patients?

Thus, the conflict arises between fulfilling the duties of the nursing profession and caring for those who are unable to verbalize their perception of any type of pain. This leads to the ultimate question: How can pain be better identified and managed in patients who cannot self-report?

**Name:** Kathryn Richardson

**Title:** Strength and Conditioning Programming and Its Effect on Anterior Cruciate Ligament Reinjury

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** The non-contact anterior cruciate ligament tear is an injury that is both prevalent and devastating with respect to athletic performance in women’s sports. The rate of ACL injury for women is more than three times that of their male counterparts competing in the same sports. Surgical practices and early phase rehabilitation has evolved substantially in recent years, but the end stage return to sport protocol remains highly generalized and lacks a standardized and objective criteria for a safe return to play. There is a need to place greater emphasis on the role of strength and conditioning specialists when addressing an athlete’s transition from physical therapy back into team training and returning to their previous level of play. At many institutions, the importance of strength and conditioning programming as a means of injury prevention and improving athletic performance is overlooked, especially as it relates to women’s sports. In many cases the responsibility of athletes’ strength and conditioning needs post-ACL reconstruction are passed straight from a physical therapist to a head coach who is most often unqualified to pass judgment on the athlete’s readiness to return to the field. The purpose of this study is to evaluate the difference in ACL reinjury rates among female athletes who are simply released for full activity and immediately return to unrestricted high-level sports participation as compared with athletes who follow an objective late-phase rehabilitation program under the guidance of a strength and conditioning specialist

who is working to identify and correct residual neuromuscular deficits, teach appropriate movement patterns, and promote balanced acquisition of strength before and after the athlete's full release to competition.

## **Poster Presentation Graduate**

### **C6**

**Name:** Michael Trovato

**Title:** What is Health? The American Perception of Overall Health

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** Health has been a hot-button topic in the United States for many years. Recently, health care policy has remained a polarizing point of contention among politicians, pundits and the general public. While many are quick to debate about the state of our health as a nation, there is one question that begs to be asked: What exactly is "health"? This study is designed to examine the theory that there is an overall discrepancy in beliefs regarding the various dimensions of health, and that these perceptual differences are likely influenced by one's medical history, personal experiences and information consumed through exposure to mass media. Through surveys regarding personal views of what "health" encompasses, this study aims to clarify how, and to what extent health is perceived by the American public. The goal of this study is to clarify these perceptions in order to develop a mechanism to address how the various dimensions of overall health are understood at an individual level, and to ultimately improve our overall health as a nation.

## **Poster Presentation Undergraduate**

### **C1**

**Name:** Dina Caldararo, Jillian Meli, Ashley Krug, Angelia Rivera

**Title:** Distraction techniques and pain scores during painful medical procedures in young children

**Faculty Advisor:** Professor Yiyuan Sun

**Abstract:** Nurses are involved in caring for many young patients in the medical field. The fear of needles and other painful procedures cause children to be afraid, which leads them to experience high levels of pain. A variety of distraction techniques are available, however, it is still unclear if these techniques are really effective in decreasing pain scores. The purpose of this paper is to examine if distraction techniques during painful medical procedures result in lower pain scores in young children compared with no intervention. Studies will be identified by searching in electronic databases such as Medline, Cinahl, Proquest, etc. A total of 16 articles will be used to examine different distraction techniques used and if they are effective in lowering pain scores in children.

The ICSI grading system will be used to evaluate the quality and strength of evidence to support clinical practice.

## **C2**

**Name:** Leah Harkin, Marylen Leon, Tiffany Riviere

**Title:** Postpartum Depression

**Faculty Advisor:** Professor Yiyuan Sun

**Abstract:** Nurses serve a vital role in enhancing the health, and health care experiences of new mothers that often experience post partum depression. Postpartum mood disorder affects the whole family negatively. It influences the infant's cognitive, social, and emotional development. As nurses, we are one of the first lines of service that is provided to postpartum women; therefore it is critical that nurses educate themselves and their patients about a certain range of treatment options. A variety of treatment options are available, however psychotherapy and antidepressant medications are methods more actively used today. Currently, there is not a clear way to select the safest and more effective way of treating PPD. The purpose of this paper is to examine if antidepressant medications will effectively treat PPD compared to the effectiveness of a combination of antidepressants and psychotherapy. Searching in electronic databases such as, Cinalh, Medline, Cochrane library, and more will identify the studies needed. The ICSI grading system will be used to evaluate the quality and strength of evidence to support clinical practice. Overall, the importance of the appropriate treatment and early intervention studies cannot be underestimated because it can be life threatening for the mother and child.

## **C3**

**Name:** Steven Hartstein

**Title:** Global Patient Awareness

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** Knowledge of what one is being treated for in the doctor's office or on the field is of questionable certainty. Language and communication barriers, lack of scientific education, and missing guidance for how to maintain one's body are factors that are commonly overlooked in modern medicine. Through the administration of surveys to healthcare professionals and patients, knowledge and the validity of true informed consent will be examined. A condition-specific, multilingual test, will be administered to patients and scored, asking them why they are being treated, what causes their condition, and how to rectify it. Healthcare professionals and their patients will also complete a survey, asking them to rate the level of understanding shared during specific encounters.

## **C4**

**Name:** Krista Tortora, Kristi Troha, Shelby Bossie, Akeilia Thompson

**Title:** Emotional Support

**Faculty Advisor:** Professor Yiyuan Sun

**Abstract:** Every type of cancer is managed and treated in a particular way depending upon the type of cancer it is. However, regardless of the treatment and circumstances of the patient, having emotional support throughout it all from family and friends versus not having any support can really impact the way the patient feels during the most difficult of

times. Research suggests that having emotional support from all aspects improves the quality of life for many cancer patients.

## **C5**

**Name:** Lindsay Zissis

**Title:** Schizophrenic Speech

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** Schizophrenia is a mental disorder that spans across various domains. Through factor analysis, it was determined that the presence of positive, negative, disorganized, and affective symptoms contribute to the condition and diagnosis of schizophrenia. During the last twenty years, the classification of schizophrenia transitioned from extensive alterations in mood, behaviors, and thoughts to the deterioration of cognitive functioning. According to the DSM-5, symptoms of schizophrenia affect a client's executive functioning, memory, social pragmatics, language, theory of mind and intellectual processes. Primary defects of schizophrenia include neurocognition and social cognition deficiencies. With a concentration on language, cognitive-social symptoms range from affective flattening, dysfluency, formal thought disorder, and memory recall. It could be argued that schizophrenic agolia, the poverty of speech, is a reflection of illogical, disorganized thinking. Within a multidisciplinary team composed of psychotherapists, psychiatrists, social workers, and speech-language pathologists, these professionals should adopt a multidimensional approach to treatment. Treatment would be more effective through a holistic method involving language, cognitive, and affective rehabilitation, as opposed to exclusively cognitive rehabilitation. A client with schizophrenia has the ability to develop their neurological and social cognitions to improve their overall prognosis and treatment of this disorder with intensive, multidimensional therapy.

## **Social Sciences**

### **Oral Presentation**

#### **Undergraduate**

**Name:** Chad Houghton

**Title:** Court Officers: Power and Authority within Arraignment Courts

**Faculty Advisor:** Professor Deborah Little

**Abstract:** This presentation will examine if the court officers in the arraignment court have power and authority and how they display it. The basis of the definition for power and authority will come from a combination of the early thinkers such as, Karl Marx, Max Weber and Talcott Parsons. This paper will demonstrate the authority of a position of power, and explain how the position itself holds the authority rather than the subject within the position. This study used observation and jotted field notes of an arraignment court over a period of five weeks. Through the reviewing of field notes, coding and analytic memos were used to organize the information. Through these strategies the study showed that the court officers do indeed have power and authority. Through restriction of movement, risk management, and spatial control, the court officers are able to control all

movement within the courtroom and court house. The court officers must submit to the judge, but in the hierarchy of the court room the court officers are among the top.

**Name:** Michael Manzo

**Title:** The Underrepresentation of Women in U.S Political Institutions

**Faculty Advisor:** Professor Margaret Gray

**Abstract:** Until the 1970s, women held almost no major elective positions in the United States government. The only two female governors during that decade were Ella Grasso, a Democrat from Connecticut, and Dixie Lee Ray, a Democrat from Washington. It wasn't until 1978 did Nancy Kassebaum, a Republican from Kansas, become the first woman elected to the United States Senate for a full term without a husband who previously served in Congress. By 1979, women held less than five percent of the seats in the House of Representatives and approximately ten percent of state legislative positions in the United States. Today, women comprise 20% of the Senate, 17.8% of the House of Representatives, 10% of state governors, and only 17.7% positions in U.S political institutions overall. While the presence of women in U.S politics appears to have grown since the 1970s, an overview of the membership of Congress and other political institutions along with statistical data reveals enduring underrepresentation.

Why do women remain underrepresented in U.S political institutions? I will argue that the underrepresentation is caused by internal and external factors which contribute to a widening gender gap of political ambition between men and women. Political ambition is shown to be the direct cause of women's disengagement in U.S politics. Additionally, political ambition encompasses two internal factors: women's negative perceptions on the electoral environment and women's self-critical perceptions of candidacy qualification. Whereas, external factors, such as discrimination and stereotypes, often reinforce women's tendency to not be recommended to run for elective positions and promulgates the perception of gender biased trends in elections.

**Name:** Desiree Mitchell

**Title:** Archaeological Survey of the Volkmar & Goodpaster River areas of the Middle Tanana Valley, Alaska

**Faculty Advisor:** Professor Kathryn E. Krasinski, Professor Brian T. Wygal

**Abstract:** Adelphi University, in cooperation with University Paris Ouest Nanterre La Défense, continues research into the emergence and cultural evolution of prehistoric hunter-gatherers in the Middle Tanana Valley. To accomplish this, we have selected the Volkmar Lake and nearby Goodpaster River region for a long-term research initiative. Previously unexplored by archaeologists, we believe this area has tremendous scientific potential. In this report, we highlight recent discoveries from project years 2011-2013 when preliminary reconnaissance and survey yielded a range of new archaeological finds. While most are Mid-Holocene in age, earlier deposits have been identified.

**Name:** Kimberly Rieger

**Title:** On the Extinction of Neandertal in Eurasia: With implications for the northern expansion of modern humans

**Faculty Advisor:** Professor Brian Wygal

**Abstract:** This paper reviews the most recent publications on the extinction of Neandertals based on competing climatic and interbreeding hypotheses using the Caucasus region as a case study wider Eurasia. We conclude that the small percentage of archaic alleles observed in contemporary Europeans is the result of genetic retention from a shared common ancestor and not from modern human admixture with Neandertals. Thus, the extinction of Neandertals was the result of numerous local population extinctions exacerbated by an inability to adapt to rapid environmental changes and not genetic swamping by modern humans.

**Name:** Catherine Rudell

**Title:** Partisanship, Gridlock, and One-Party Domination

**Faculty Advisor:** Professor Margaret Gray

**Abstract:** For this project, I have examined partisan politics in U.S. Congress. I asked the following research questions: (1) Are breaches of etiquette in political discourse indicative of extreme partisanship? (2) Has extreme partisanship become more common today than it was in the past? (3) What are the factors that foster partisanship? (4) Is extreme partisanship becoming an increasing menace to effective governance? To find out the answers to these questions, I used different types of information such as quotations of political candidates, DW-NOMINATE, and Gallup and Pew Polls. From this data, I found that breaches of etiquette are not indicative of increased partisanship; however, partisanship has indeed increased over the years. I also found that factors such as human nature, gerrymandering, less off-hours interaction between Congress members, large donations from special interest groups, and “the politics of blame,” seem to foster partisanship. Gridlock and one-party domination are possible negative consequences of extreme political polarization. In conclusion, I predict that Americans may have to learn to accept political gridlock because oppression of one party over another would be much worse.

**Name:** Melissa Salama

**Title:** The Plight of Africa's Last Colony: International Legality v. Political Expediency

**Faculty Advisor:** Professor Francesco Bastagli

**Abstract:** Western Sahara, a territory in Northern Africa bordering Algeria, Morocco, Mauritania and the Atlantic Ocean, has long been an area of conflict and dispute in regards to its decolonization and movement towards independence. The goal of this research project is to analyze the different perspectives on the Conflict in Western Sahara by beginning with its history leading into the current situation in that region. This project will touch upon topics such as the United Nations role including the measures they have or have not taken and the response of the International community both individually and as a whole. While looking at the Western Sahara Conflict, it is important to look at the scope of the conflict including the implications that this conflict has on the region as well as its impact on International actors such as the European Union and the African Union.

**Name:** Alexa Savino

**Title:** The Complications of Catastrophe: An Analysis of Sandy Relief Efforts through the Lenses of Utilitarianism and Luck Egalitarianism

**Faculty Advisor:** Professor Traci Levy



**Abstract:** Few works have been published analyzing policies integral to Hurricane Sandy recovery, due to the fact that the disaster devastated the East coast so recently. This research addresses this problem by assuming the task of examining Hurricane Sandy relief policies in the context of distributive justice, assessing whether or not government resources have been fairly allocated and measures have been justly implemented to assist victims. The frameworks of two applicable political theories are utilized: utilitarianism, which explores how the consequences of policy can be arranged for the greatest good of the greatest number, and luck egalitarianism, which analyzes the degree to which individuals have control over circumstances they face (luck vs. choice) and then determines government response accordingly. By placing nuanced angles of each theory in conversation with one another, this work seeks to provide a comprehensive portrayal of perspectives that can be used to holistically evaluate Sandy relief efforts. Issues explored include: the process of acquiring a permit to rebuild, government assistance for Sandy victims dealing with damage from multiple natural disasters, and the impact of the Biggert-Waters Flood Insurance Reform Act. Resources amassed for this project include New York State permits, recent federal legislation, FEMA reports, and news articles with accounts by victims grappling with challenges related to provisions addressed; in addition, theoretical works in prominent academic journals were consulted. Findings suggest that the utilitarian calculus used to justify some of the measures explored is often irreconcilable with luck egalitarian philosophy, as efforts aimed at bringing about the greatest good for the greatest number often, in actuality, burden those they are intended to assist. Thus, this research also explores existing incongruities in terms of the theories motivating certain disaster relief measures and their actual, real-world consequences.

**Name:** Joanna Wells

**Title:** Middle Susitna Valley Archaeological Survey Report from Project Years 2011-2013

**Faculty Advisor:** Professor Brian T. Wygal, Professor Kathryn E. Krasinski

**Abstract:** Adelphi University, in cooperation with the Matanuska-Susitna Borough, continues a multiyear investigation into the economic transition from early to late prehistoric cultures in the Middle Susitna Valley. Survey and test excavations including ongoing work at Trapper Creek Overlook (TAL-092) contribute to a refined chronology and abrupt transition from Pleistocene hunting to Late Holocene salmon harvesting and early 20th century Euroamerican settlement. The earliest evidence from the region indicates initial inhabitants were highly mobile with a sporadic presence. However, by the contact era, Ahtna and Dena'ina were semi-sedentary and intensively storing salmon as demonstrated in recently tested sites near Montana Creek.

## **Poster Presentation Graduate**

**E9**

**Name:** Lisa Casale

**Title:** Naming and narrative discourse in three subgroups of PPA: semantic, agrammatic/non-fluent, and logopenic

**Faculty Advisor:** Professor Renee Fabus

**Abstract:** Primary Progressive Aphasia (PPA) is caused by degeneration of brain cells that control speech and language. This type of aphasia is a progressive language disorder which begins with the gradual loss of speech or language depending on the brain areas affected by the disease. There are three variants of PPA; non-fluent/agrammatic, logopenic, and semantic. The purpose of this study is to investigate the differences in naming and narrative discourse that exist amongst the subtypes of primary progressive aphasia (PPA). No literature to date has examined whether or not differences exist among the subtypes of PPA. The results of this study may provide valuable information about how speech-language pathologists (SLPs) and other healthcare providers treat the different subtypes of PPA.

There will be nine participants recruited for this study; three from each subtype of PPA. The principal investigator will administer a battery of language and executive functioning measures to assess the participants' language skills. Following the language measures, the principal investigator will present the participants with a naming and narrative discourse task to ascertain differences between the participants in the different subtypes of PPA. Results of this study are expected to reveal differences in naming and narrative discourse between the different groups of PPA.

### **E11**

**Name:** Nicole Fountoulis, Kathryn Hoffman

**Title:** Does test anxiety have an effect on students in your community?

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** With the installation of common core and data driven instruction students are asked to take numerous assessments. It is believed that the community in which a child lives has no effect on the amount of test anxiety they face. The significance of this study is to determine whether the community a student lives has an effect on their amount of test anxiety. A group of fifty students in an urban community, as well as, a suburban community will be given a self report scale developed by Brendas-Jacob and Friedman to determine if this is evident in the communities we teach in. Additionally, this research will allow us to better understand our students and aide them in lessening their anxiety.

### **E12**

**Name:** Kathryn Hoffman, Nicole Fountoulis

**Title:** Does Community Effect Test Anxiety in Elementary Students?

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** With the installation of common core and data driven instruction students are asked to take numerous assessments. It is believed that the community in which a child lives has no effect on the amount of test anxiety they face. The significance of this study is to determine whether the community a student lives in has an effect on their amount of test anxiety. A group of fifty students in an urban community, as well as, a suburban community will be given a self report scale developed by Brendas-Jacob and Friedman to determine if this is evident in the communities we teach in. Additionally, this research will allow us to better understand our students and aide them in lessening their anxiety.

### **E13**

**Name:** Harry Loizides

**Title:** How do gender dynamics influence participation and attitudes towards mathematics in secondary mathematics classes?

**Faculty Advisor:** Professor Robert Danielowich

**Abstract:** Differences between male and female students are often a discussion point among secondary mathematics teachers. If teachers are able to acknowledge the differences between boys and girls, if any, then teachers can adapt their lessons and teaching strategies. With these adaptations, mathematics teachers can further develop the students' understanding of the topics and offer various initiatives for everyone to succeed in the classroom. This presentation will show that gender differences among students, as well as mathematics teachers, plays a vital part in how students interpret their opinions, use, and relevance in mathematics. By using these findings in the student teaching experience, I am able to provide a more wholesome and overarching approach to mathematics so that every student is captivated by mathematics.

### **E14**

**Name:** Katie Mathew

**Title:** You Can't Stop the Beat: The effect of singing, rhythmical-reading and prose-reading on the sustained attention and verbal participation of a four-year-old child with a language delay

**Faculty Advisor:** Professor Susan Lederer

**Abstract:** Research has advocated for shared book reading. While a literature base exists for the best reading practices, it does not address the comparative effects of singing, rhythmical-reading, and prose-reading on sustained attention and verbal participation. Therefore, a case study was undertaken with a four-year-old male child with a language delay, secondary to an Autism Spectrum Disorder. The child was exposed to three different treatment protocols, contrasting in how pairs of books were matched and presented (i.e., sung versus rhythmically read; sung versus prose-read; and rhythmically read versus prose read). The study used an alternating-treatment design using pairs of equivalently-structured children's books. Findings varied within and across treatment protocols, in terms of the effect of text structures and presentation on attention and verbal language participation. Across all three treatment protocols, results suggest the following: 1) sustained attention is related to routine book reading or frequent reading of the same book but not reading condition; 2) rhythmic book texts with rhyme, cadence and repetition stimulate cued language; and 3) prose may stimulate spontaneous language.

### **E15**

**Name:** Brittany Renne

**Title:** Accuracy and Performance of Type 2 Sound Level Meter Applications

**Faculty Advisor:** Professor Yula C. Serpanos

**Abstract:** Measures of background ambient noise levels are critical to ensure appropriate room environments during hearing screening. Precise measures of environmental sound pressure levels are traditionally conducted using Type I sound level meter (SLM) instrumentation. The recent availability of SLM applications (apps) for popular devices such as the iPhone and iPad (i.e., Type 2 SLM) has created easy access and convenience

for environmental sound measurement, which may be useful to professionals conducting hearing testing. However the accuracy of sound measures using the various Type 2 SLM apps in different devices has not been confirmed. This study compared the accuracy of 6 Type 2 SLM apps (ranging in price) in iPhone and iPad devices to a Type I SLM using tonal and speech noise conditions. Differences in accuracy were noted across apps, devices, and stimuli. The results of this study suggest that sound measures obtained using Type 2 SLM apps on iPhone and iPad devices may be inaccurate if not properly calibrated.

#### **E16**

**Name:** Robyn Sacks

**Title:** Comprehension With The iPad in Typically Developing Children

**Faculty Advisor:** Professor Cindy G. Arroyo

**Abstract:** In today's society, the iPad is a device that is now commonly used amongst teachers and therapists for the purpose of engaging children in subject lessons in the school setting. In regards to literacy, the iPad may sometimes be used in place of picture books to enhance reading comprehension and literacy skills. The purpose of this study was to investigate both picture books and the iPad to see which format would provide the greatest achievement in reading comprehension. A total of four children between the ages of 4 years;0 months and 4 years;11 months read a story with the investigator for six weeks either using picture books or the iPad. Pre-literacy skills such as story comprehension, print awareness and phonological awareness were evaluated using a pre-and post-test (Lederer, Soman, and Sanfillipo, 2005). There was not a significant statistical difference between the scores for the iPad group and the picture book group. All children did show individual gains in some scores. Qualitatively, it can be inferred that factors such as emerging phonemic and print awareness literacy skills, home environmental factors, reading with adult instruction, and a child's personal interest in reading contribute to the development of pre-literacy skills.

#### **Poster Presentation**

##### **Undergraduate**

#### **E4**

**Name:** Allison Adler, Ashley Corbeil, Joanna Wells

**Title:** Anthropological Archaeology Considerations Regarding the Geometric Period Burial Ground at Naxos Island-Greece

**Faculty Advisor:** Professor Anagnostis Agelarakis

**Abstract:** Significant questions remain unanswered regarding the dynamics of the human condition that prevailed during the transitional period between the "Dark Ages" and the Geometric era in ancient Greece. Based on archaeological research of a select number of Late Bronze/Early Iron Age strong holds, however, it appears that there was a resurgence in the arts, resurrection of the tradition of the written record and revival of political organizational abilities that were essential for development of the early city-state. Nonetheless, very little is known about the daily lives of individuals who lived during

this important time of transition. These daily subtleties facilitated transformations that created the foundations, visions and legacies of the Geometric period in Greek antiquity. This paper aims to elucidate aspects of the human condition on Naxos island during the Geometric period (9th -7th centuries BC/BCE) focusing on the archaeo-anthropologic study of human skeletal remains recovered from a Geometric era burial ground on the island. The skeletal population sample involved sixty-four homini interred as inhumations or in cremated form in individual or family graves. The study of differential prevalence of burial customs as documented between age and biological sex subgroups offers important reflections on distinct cultural funerary norms and practices. Intra-site analyses through the lens of physical/forensic anthropology of burial customs, skeletal biologic/anatomic data and the palaeopathologic profile of the population provide a unique basis to broadly reconstruct aspects of the lives of the individuals involved. This paper, therefore, may be of interest to forensic anthropologists and archaeologists, historians and scholars studying the Eastern Mediterranean ancient world.

## **E6**

**Name:** Anastasiya Martinova

**Title:** Peace keeping and building - A comparative case study of Kosovo and Sierra Leone

**Faculty Advisor:** Professor Devin Thornburg, Professor Francesco Bastagli

**Abstract:** The United Nations has developed more of a humanitarian relief role in the international community since the 1990's. Peacekeeping and peace-building roles have become increasingly crucial and the responsibility to protect furthered UN interaction in countries requiring assistance. In 1999, there were two post-conflict crises, which faced similar problems and required intervention from the UN-Kosovo in Europe, and Sierra Leone in Africa. This research is to analyze the mandates for both Kosovo and Sierra Leone to get a better sense of the mission, the organization, priorities, structure, resources, implementations and challenges in order to make a comparative assessment. The factual comparison of the mandate as well as the lessons learned from both missions will be the foundation when looking at both countries present-day and how the mission was successful or unsuccessful in terms of short-term and long term plans.

## **E5**

**Name:** Katelynn Kelly

**Title:** Technical Illustration of Late Pleistocene Stone Tool Technology from the Susitna Valley, Alaska

**Faculty Advisor:** Professor Argio Agelarakis and Professor Brian T. Wygal

**Abstract:** Research conducted between interior and coastal Alaska at the Susitna River Overlook (SRO) site (TAL-95) reveal information about the prehistoric hunting groups who occupied the region during the late Pleistocene to early Holocene transition (ca. 10,000-8000 years ago). Small-scale foraging societies relied on lithic raw material provided by their environments to construct their stone tool industries. Flaked tools and waste debris left behind allow researchers to assess the prehistoric technology of these groups. The significance of the lithic assemblage provides insight about the tool types, production and maintenance in addition to the migratory routes of early prehistoric Alaska inhabitants of central and south Alaska. These behaviors become particularly

relevant when considered within the wider context of human adaptation to climate change. The lithic assemblage found at SRO suggests early inhabitants were highly skilled game hunters of large game. In this poster, technical illustration is used as a method of depicting artifact attributes such as flake scars, platforms, raw material, and stone texture for understanding and depicted past human behaviors as represented by the archaeological record. To better accomplish this, I compare photographs to scientific illustrations in order to show that digital methods may not always capture the important components used by archaeologists for identified the human modification of stone.

## **E7**

**Name:** Danaleah Schoenfuss, Jennifer Babayev

**Title:** Mortuary and Religious Practices during the Classical Period at Naxos Island, Greece: Reflections through Zooarchaeology

**Faculty Advisor:** Professor Anagnostis Agelarakis

**Abstract:** A number of ancient Greek texts describe burial practices such as the offering of funerary meals, provisioning the dead at time of interment, as well as propitiating to deities through ceremonial sacrifice of fauna. Aspects of such “fossilized” behavior of funerary veneration may be reconstructed through the study of human activity areas of religious conduct, focusing not only on literary sources, but also on site contextual associations in particular relation to assemblages of the preserved zooarchaeological record.

This paper, part of a larger ongoing anthropological project, aims to provide important information on mortuary and sacrificial practices at the island of Naxos through analyses of faunal remains unearthed between 1978 and 1987 from an ancient burial ground dating to the Classical Period. Faunal remains recovered in association with the burial contexts juxtaposed to those recovered from a well context appear to reveal the taxonomic range of “expected” sacrificial animals for instances of a funerary meal, provisioning of the dead, as well as for ceremonially appeasing deities. The faunal remains being studied through the approaches of taphonomy and zooarchaeology offer evidence that illuminate processual conditions of sacrificial animal dressing, a roster of taxonomic classifications for the fauna represented, as well as the distribution of faunal anatomic components apportioned to contexts of the newly interred versus the components deposited to the well.

This paper presents site specific bio-archaeological information in conjunction with textual research to provide insight into the complex and often regionally idiosyncratic domains of burial custom and belief, reflecting on aspects of the human condition and the dynamics of the afterlife of the ancient Greek world. Therefore, this presentation should be of interest to scholars working in the fields of ancient history, religion, anthropology, archaeology and particularly zooarchaeology.

## **E8**

**Name:** Samantha Zawistowski, Kimberly Lombardi

**Title:** Human Demographics at Apoloslemis Crete

**Faculty Advisor:** Professor Anagnostis Agelarakis

**Abstract:** This project, part of a larger interdisciplinary endeavor, presents forensic anthropologic data relative to the ongoing study of the anthropological materials

recovered at the Aposelemis site in Crete, Greece. The human remains represent a random population sample retrieved from 30 funerary contexts comprising a component of the first formal Neolithic Burial ground discovered in the island. The burial site was discovered deeply stratified beneath a Minoan time period buildings complex.

Laboratory efforts for the preservation and consolidation of the dry skeletal remains yielded adequate cranial, dental and infracranial axial and appendicular anatomic surfaces for the purposes of physical anthropologic investigations relative primarily to the study of the demographic dynamics and the palaeopathological profile of the population sample involved.

The forensic anthropologic analyses focused on age subgroup determinations, biological sex assessments, epigenetic variability for examination of gene pool dynamics and bio distance, skeletal biological growth conditions, aspects of the nature and quality of preparation of dietary intake as revealed from evaluations of jaws and teeth, skeleton-muscular systems' adaptations to stimuli of the physical/external environment and cultural mandates-often indicative of clues relative to gender based labor diversity. Further, development, acquired and degenerative skeletal changes permanently recorded on dental and bone surfaces provide a nexus to the life conditions and perceived environments of the individuals involved, during the Neolithic Period of Crete in particular and the Eastern Mediterranean in general.

This study offers unique contributions of interest to all scholars investigating the human condition through the social and biological sciences during the Neolithic period in the Mediterranean basin.

Author's Note: The Aposelemis Anthropology Project was supported by a grant allocated by the Institute of Aegean Prehistory

## **Physical Sciences and Mathematics**

### **Oral Presentation**

#### **Undergraduate**

**Name:** Daniel Stewart

**Title:** Programmed Game

**Faculty Advisor:** Professor Lee Stemkoski, Professor Christopher Storm

**Abstract:** I'd like to show off a game that I built using graphical user interface programming in java for my senior seminar project two semesters ago. Research was involved in the fact that I wound up finding out all of the programming techniques and code and functions for the java swing library myself, and it also shows off an artistic style, because I did all of the writing and design.

**Name:** Michael Trietsch

**Title:** Development of an extremely sensitive sensor for NO<sub>2</sub> employing cavity enhanced absorption spectroscopy and an LED source

**Faculty Advisor:** Professor Gottipaty N. Rao, Professor Andreas Karpf

**Abstract:** Monitoring Nitrogen dioxide in the environment is important because it plays a vital role in atmospheric chemistry and is responsible for smog, tropospheric ozone, acid rain, and is a greenhouse gas. NO<sub>2</sub> is also known to be a lung irritant and can cause

asthma and bronchitis in the elderly and infants. Most anthropogenic NO<sub>2</sub> is produced by automobiles, power plants and combustion processes. In view of this, the EPA mandated that major traffic intersections be monitored for NO<sub>2</sub> and has specified acceptable upper limits in the concentration of NO<sub>2</sub> levels.

We are developing an extremely sensitive and selective sensor for monitoring NO<sub>2</sub> in the environment and automobile emissions. The sensor is cost effective, portable and can be field deployed. It employs a low cost LED source (LedEngin LZ1-00UA00), a high finesse optical cavity (20 cm length) fitted with high reflectivity mirrors, followed by a focusing arrangement and an "Ocean Optics" model HR4000 spectrometer. A fiber optic mechanism is employed to couple the cavity output to the ocean optics spectrometer. We employ Incoherent Broadband Cavity Enhanced Absorption Spectroscopy technique which is optimally suited for portable field based sensor applications. We have successfully recorded the transmission spectra corresponding to the 405 nm absorption band of NO<sub>2</sub> after employing necessary filters to block the high fluorescence observed from the focusing lenses. The details of the sensor and its performance will be reported.

## **Poster Presentation Undergraduate**

### **B21**

**Name:** Jami DeGrote

**Title:** Synthesis of 7-alkoxy-4-trifluoromethylcoumarins via the Pechmann Condensation Reaction with Catalytic Iodine

**Faculty Advisor:** Professor Melissa VanAlstine-Parris

**Abstract:** Coumarin derivatives are common compounds used widely in the scientific community, ranging from pharmaceutical to commercial applications. For example, they can be used in enzymatic fluorometric assays, as anticoagulants such as Warfarin, and to make laser dyes. The focus of this research is to synthesize various 7-alkoxy-4-trifluoromethylcoumarins via the Pechmann condensation reaction using molecular iodine as a catalyst. Due to the fact that these coumarin derivatives are relatively expensive to purchase and scarce in quantity, it is advantageous in our undergraduate research laboratory to synthesize these compounds both cost effectively and in larger quantities. The goal of our research is to synthesize these compounds and report their spectral data to expand the current characterization found in the literature. The Pechmann condensation reaction is an inexpensive, one step reaction used to synthesize coumarins from a phenol and  $\beta$ -keto ester. The harsh conditions of the original Pechmann reaction using sulfuric acid as a catalyst can be avoided with an iodine catalyst. 7-Hydroxy-4-trifluoromethylcoumarin, 7-ethoxy-4-trifluoromethylcoumarin, 7-methoxy-4-trifluoromethylcoumarin, and 7-benzyloxy-4-trifluoromethylcoumarin have been successfully synthesized. All coumarin derivatives were purified through flash chromatography and confirmed by NMR. Further experimentation will involve the optimization of various reaction parameters, including a decrease in the amount of solvent and catalyst used as well as varying the reaction time and temperature.



## **B22**

**Name:** John Dellatto, Kevin Teng

**Title:** Injection Locking a 795 nm Diode Laser with Microwave Modulation

**Faculty Advisor:** Professor Matthew J. Wright

**Abstract:** We are exploring using microwave frequency modulation of 795 nm injection-locked diode lasers as a way of tuning the frequency of a laser over a large frequency range and short time scale. Light from an external-cavity diode laser is locked to an external frequency reference, is passed through an Electro-Optic Modulator (EOM), and is used to injection-lock a free running diode laser. We will discuss the generation of sidebands from 3GHz – 7GHz and how they depend on the power of the microwave signal. We will also discuss injection-locking to one of the sidebands.

## **B23**

**Name:** Martin Disla, Anthony Limani

**Title:** Progress Towards Laser Cooling a Dense Atomic Beam

**Faculty Advisor:** Professor Matthew J. Wright

**Abstract:** Laser cooling of dilute atomic gases has paved the way for exploring many aspects of quantum mechanics in extraordinary detail. Although limited to a few atomic species (and now a handful of molecules), the technology has been the centerpiece of two Nobel prizes with many more on the way. Recently, a different approach has led to the laser cooling of dense gases. While the technology is still limited to a small number of atomic species, it is reasonable to believe that soon we'll be able to achieve macroscopic quantities of cold gases using this technique. We are constructing a dense atomic beam source of Rb atoms that operates from 300 K to 600 K. We have designed the apparatus to access the high density region in the beam immediately after exiting the oven. Initial heating tests under vacuum confirmed that we will be able to access the desired temperature range. We will add atomic Rb to the oven and measure its density as a function of temperature using spectroscopy.

## **B24**

**Name:** Michael Fernez

**Title:** A new technique for the detection of NO<sub>2</sub> employing broadband cavity ring-down spectroscopy and a CW diode laser

**Faculty Advisor:** Professor Gottipaty Rao

**Abstract:** We report on the development of a new technique for the detection of NO<sub>2</sub> with high sensitivity and selectivity employing broadband cavity ring-down spectroscopy and a cw diode laser. This technique is well suited particularly for the detection of NO<sub>2</sub>. In this technique, the laser supports multiple cavity modes exciting several rotational vibrational transitions of NO<sub>2</sub> species simultaneously. This enhances the sensitivity of detection by several orders of magnitude compared to the traditional approach where a single frequency laser excites a single transition of NO<sub>2</sub>. Consequently, the light leaking from the cavity consists of different wavelengths in a narrow range but essentially corresponding to the absorption of NO<sub>2</sub>. This significantly enhances the sensitivity of detection and the signal to noise ratio improving the selectivity as well. The cavity ring down time is basically a single exponential. This arrangement simplifies the procedure

for detector alignment and also makes it less susceptible to vibrations which are necessary for sensor applications.

In conventional cavity ring down spectroscopy, one employs a single frequency laser and tunes the laser across the absorption features of the species. The spectral resolution is determined by the spectral width of the exciting laser source. Often, the laser is tuned with the longitudinal mode of the laser cavity so that a specific excitation is possible resulting in a single clean exponential decay. In our approach, we use a broadband source to excite the broad band of NO<sub>2</sub> at approximately 405 nm.

Employing the new technique we achieved a sensitivity of about 7 ppb (parts per billion) for the detection of NO<sub>2</sub>.

## **B25**

**Name:** Jaclyn Giuliante

**Title:** Methods for Approving Raw Materials at A Cosmetic Company

**Faculty Advisor:** Professor Maria Nagan, Professor David Parkin, Professor Paul Cerasuolo

**Abstract:** At a cosmetic company, the raw materials used in production must first be authenticated. Methods of authentication include titrations, high performance liquid chromatography (HPLC), infrared spectroscopy, gas chromatography and mass spectroscopy, viscosity, specific gravity and density, physical properties, ultra-violet and visible spectroscopy, volatile matter, refractive index, pH, and melting and dropping points. One of five different titration methods employed, the iodine value, determines the amount of iodine taken up by 100 grams of an oil, wax, or fat, as well as the degree of unsaturation. The iodine values of two different lots of the same sample (A and B) were determined to be 93.3 g/100 g (A) and 94.4 g/100 g (B). It is important for the values to be within the predetermined range because when the samples are added to a batch for a cream, the physical form and chemical composition must be what the final cream is expected to be. One of the fifteen different types of HPLC methods used was Honokiol Magnolol, which determines the percentage of Honokiol and Magnolol in a sample compared to an analyzed standard. Sample C contained 51.1% of Honokiol and 44.9% of Magnolol, which was within the range and can be further used in facial creams. Over the last year and a half, 250 samples were authenticated, including 3-10 tests per sample.

## **B26**

**Name:** Brian Kaufman, John Mavroudes

**Title:** Magnetic field assemblies for scientific applications

**Faculty Advisor:** Professor Matthew Wright

**Abstract:** We are building two different types of magnetic field assemblies for scientific applications. In one experiment, we use a magnetic field coil to create a magneto optical trap to confine ultracold atoms. In another experiment we are designing an apparatus to test the effects of magnetic fields on fruit flies. Our approach will allow us to tune the absolute magnetic field from 0G to 100G in all 3 dimensions.

## **B27**

**Name:** Melanie Mauro

**Title:** Cryptography Decoded

**Faculty Advisor:** Professor Salvatore P Giunta

**Abstract:** We will be presenting a poster on cryptography. The poster will discuss the history of cryptography, in relations with the Caesar cipher and the American Revolutionary war cipher. It will then discuss how we pursue a more mathematical Association for Cyprus, using the numbers zero through 25 to represent the letters of the alphabet. This will then point us in the direction of modulo arithmetic by making additions enable efficient enables. Patterns can be discovered and conjunctions can be made, particularly about multiplication. For example, which number appears more often than others while multiplying modulo n. Finally this will lead us in the idea of affine ciphers. These encryption schemes use the function  $f(x) = ax + b \pmod{26}$ , but care must be chosen in the selection of a so that the function is decryptable (invertible).

## **B28**

**Name:** Megan Ossmann, Joanna Wells

**Title:** Sand, Sand, and Sandy: a grain size analysis of coastal sediments at Long Beach and Fire Island

**Faculty Advisor:** Professor Beth Christensen

**Abstract:** Hurricane Sandy clearly impacted the shallow coastal environment with a massive 10m storm surge and days of wind-driven waves. The impact on the sea floor is still being researched. Sediment samples taken at Long Beach, Fire Island East and Fire Island West were analyzed to assess changes in sediment due to the storm. Samples were washed through a 63 $\mu$ m sieve, dried, and sieved to further separate grain sizes according to phi measurements. The sediments sieved consisted of gravel and sand due to earlier separation in the lab from silt and clay sized particles. Weight percent of each phi increment was determined. At Fire Island East (FIE) and Fire Island West (FIW) sediment grain size increases as water depth increases away from the shore. The shallowest water depth (~12m) yields a minimum average grain size of ~3 $\Phi$ . As water depth increases off shore (with the deepest sample from ~21m) grain size increases to greater than or equal to ~2 $\Phi$ . Grain sizes are generally consistent with depth between FIE and FIW based on bathymetry. Samples from the Long Beach (LB) locations are much coarser and may reflect a higher energy environment than FIE and FIW. In a less detailed grain size analysis conducted by the USGS in 2000 sand is the dominant grain size category. Our study is consistent with the earlier USGS study but also indicates variability within the study areas.

## **Psychology**

### **Oral Presentation**

#### **Graduate**

**Name:** Alyssa Conigliaro

**Title:** Differential Relationships of Implicit and Explicit Self-Esteem to Interpersonal Dependency and Detachment

**Faculty Advisor:** Professor Robert F. Bornstein

**Abstract:** Although self-esteem has long been a topic of interest to personality and social psychologists, only recently have researchers begun to conceptualize self-esteem as

having implicit and explicit components. Consistent with other traits and dispositional variables, evidence has accumulated documenting divergences between implicit and explicit self-esteem in a variety of groups. Moreover, researchers speculate that a discrepancy in implicit versus explicit self-esteem is maladaptive, reflecting (among other things) poor integration in self-representation. To contribute to this growing body of research, this study examined links between implicit self-esteem, explicit self-esteem, interpersonal dependency, and detachment.

Research on self-esteem in detached individuals is sparse, but myriad studies have documented links between high levels of interpersonal dependency and low explicit self-esteem. No studies have examined the dependency—implicit self-esteem relationship. To address these issues 40 undergraduates (mean age= 18.82) completed the Relationship Profile Test (RPT; Bornstein & Languirand, 2003), which yields separate scores for destructive overdependence (DO), dysfunctional detachment (DD), and healthy dependency (HD). All participants completed the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965); implicit self-esteem was evaluated using Implicit Association Test—Self-Esteem version (IAT-SE; Greenwald & Banaji, 1995), a performance-based reaction time index of implicit self-esteem. Results confirmed that high RPT HD scores are positively correlated with RSES scores ( $r = .77, P < .001$ ), but also showed that—contrary to expectations—HD is unrelated to IAT-SE ( $r = .00$ ). DO and DD were both negatively correlated with RSES ( $r$ 's were  $-.40$  and  $-.39$ , respectively, both  $p$ 's  $< .05$ ), and unrelated to IAT-SE ( $r$ 's were  $= .04$  and  $.11$ ). These patterns suggest that interpersonal dependency and detachment are related to explicit—but not implicit—self-esteem.

**Name:** Tara Curran

**Title:** Factors Related to Attitudes and Behaviors of Non-Faculty Employees of Universities

**Faculty Advisor:** Professor David Prottas

**Abstract:** Students, institutions, and society benefit from the retention and graduation of university students as those who do not complete their degrees consume valuable time, resources, and financial funding. This study assessed work place behaviors, attitudes, and conditions of non-faculty employees at universities working in non-teaching and non-researching functions which influence student retention and graduation (i.e. advising, counseling, involvement, and wellness). Self-report data on organizational citizenship behavior, work engagement, affective commitment, perceived organizational support, and job role conflict, role ambiguity, and role overload were collected by an online survey sent via email to 1,411 individuals at 17 universities (8 with high-graduation rates, 9 with low-rates). Hypotheses about relationships among work conditions, attitudes and behaviors were tested. Hypotheses were additionally tested regarding differences in work behaviors, attitudes, and conditions of subjects in high-graduation rate universities compared to counterparts in low- graduation rate universities.

**Name:** Hillary Depowski

**Title:** The Relationship in Psychotherapy and its Association to Therapist Interventions and Client Attachment Style

**Faculty Advisor:** Professor Jairo Fuertes

**Abstract:** The current study examines the relationship between therapist self-disclosures (i.e., things that the therapist says to the client about him/herself) and client psychological attachment (how the client feels with respect to close personal relationships). While a great deal of research has examined the effects of self-disclosure (e.g., that it makes the therapists more human in the client's eyes), no research to date has examined how disclosure affects the perceptions of clients of their therapists, particularly when the client has attachment issues or insecurities. In this study, we also link the effect of self-disclosure and attachment on the quality of the therapy relationship between therapist and client. The study has collected data so far from 38 clinical dyads randomly selected from a public database, and the results from our analyses will be presented at the research conference.

**Name:** Laura Eidlitz

**Title:** Assessment of Treatment Efficacy for Patients with Child and Adult Abuse Onset

**Faculty Advisor:** Professor Kate Szymanski

**Abstract:** Early experiences of physical and sexual abuse have been demonstrated to have serious long-term impacts on psychosocial functioning (Paolucci et al., 2001). Victims of child maltreatment have more severe posttraumatic stress disorder (PTSD) symptom profiles (Schumacher et al., 2006), worse mental health treatment outcomes (Harkness et al., 2012), and smaller social networks (Green et al., 2012). Alcohol use has been found to be higher in this population (Schumacher et al., 2006), and less successfully treated (Boles et al. 2005). This study seeks to provide further evidence that childhood trauma onset relates to symptom severity and social network size in a clinical sample with comorbid PTSD and alcohol misuse. This study also assesses the effectiveness of an integrated psychotherapy treatment geared toward traumatized substance abusers by comparing outpatients with childhood and adult trauma onsets. It was hypothesized that patients with histories of childhood physical and/or sexual abuse would report smaller social networks, and more severe PTSD symptomatology and alcohol use both at baseline and after treatment as compared to patients who experienced assault only as adults.

Participants were part of a larger randomized clinical trial assessing the efficacy of an integrated CBT treatment of trauma and addiction. In this archival study, 55 participants completed measures of trauma exposure, PTSD symptomatology, alcohol use severity, and social network size before and after 12 weeks of treatment. Consistent with hypothesis, participants who experienced sexual abuse as children reported significantly smaller social networks ( $p = .03$ ) and more frequent drinking ( $p = .02$ ) at baseline than participants who experienced sexual assaults only as adults. Post-treatment, participants with a history of childhood physical abuse had higher PTSD symptom severity ( $p = .01$ ) and frequency ( $p = .02$ ) than participants with adult onset. Clinical implications will be discussed.

**Name:** Emma Forrester

**Title:** The Effect of Trauma Integration on the Use of Metaphors: A Narrative Approach

**Faculty Advisor:** Professor Kate Szymanski

**Abstract:** The intensity of traumatic experience challenges a person's sense of narrative coherence and symbolic thinking (Herman, 1992). The ability to symbolize via metaphors

returns over time as trauma becomes more psychologically integrated (Bornstein & Becker-Maturo, 2011). However, the question remains if there are parts of tragic experiences that cannot be fully symbolized due to profound cognitive and emotional disorganization. This paper uses elements of discourse analysis and expertise in clinical psychology to explore what aspects of traumatic experiences can and cannot be expressed through metaphors by examining trauma narratives as they unfold in a stage fashion. In an analysis of ten interviews from participants with Posttraumatic Growth, a phenomenon where some areas of an individual's development surpass what was present before the trauma (Calhoun and Tedeschi, 2001), we found little use of metaphors when describing the trauma itself, yet rich use of metaphors in parts of the narrative discussing life after. These survivors have highly integrated their trauma and there is still an observable pattern within their narratives. This suggests that traumatic experiences may not render themselves to symbolic thinking and offers insight into what parts of traumatic experiences could be expressed via symbolization and which could not. These findings may provide clinicians with tools to communicate with and treat traumatized patients.

**Name:** Rachel Hartmann

**Title:** Trauma and Quality of Life among individuals with Military Experience

**Faculty Advisor:** Professor Carolyn M. Springer

**Abstract:** Post-traumatic stress disorder (PTSD) in our military is highly underreported and lacks significant research. Occurrences have increased substantially post 9/11 reaching its highest prevalence in 2011 with 15,702 individuals affected. In 2004, 3,095 incidents of PTSD were reported which supports this rapid influx of symptomology is proving to be a concerning and persistent epidemic. This research examines the variations in our servicemen's overall quality of life when correlating traumatic events and possible PTSD. Specific personal views, experiences, and symptoms may be interrelated and potential associations could allow for early detection. Participation included a minimum of 30 current U.S. residents that were 18 years of age or older with experience in the United States Military. Applicants were equally recruited regardless of gender, race, psychological or physical disabilities. Using a cross-sectional, between subjects, non-random design; all participants received the same condition. Subjective self-reports were collected using a confidential online survey generator which masked and integrated the scales utilized during testing. This included the Wisconsin Quality of Life Scale, four of the independent DDRI-2 modules used to rate military experiences, and the PCL-M scale used by the military to measure PTSD. Military bases, veteran mental health centers and related associations were contacted for recruitment purposes.

**Name:** Philip Kaplan

**Title:** Examination of Early Child-Parent Relationships from a Clinical Freudian Perspective

**Faculty Advisor:** Professor Jairo Fuertes and Professor Daniel Kremin

**Abstract:** This research employs a case study design measuring how children between the ages of 5-7 and 8-10 perceive their parents' level of authority, affection, bonding, and overall general relationship. The study included four subjects, one boy and one girl per age group. The primary researcher audio recorded an interview session with each child

within each age group and discusses from a clinical perspective implications of Freudian psychosexual theory. Previous studies have garnered very limited research in terms of exploring how children perceive their parents within the areas of authority, affection, bonding, and overall general relationship. In order to establish a more expansive framework to the field of child psychology, it is important to see how children understand and perceive the interpersonal dynamics between themselves and their caregiver.

**Name:** Caitlin Lapine

**Title:** Social Media and Text Messaging: Romantic Relationships in the 21st Century

**Faculty Advisor:** Professor Rebecca Curtis

**Abstract:** Social media and technology have changed the way people communicate and function on a daily basis. But what effect is this having on romantic relationships? More specifically, is text messaging and viewing social media profiles of one's romantic partner beneficial for people in romantic relationships or does this lack of space hurt romantic relationships? The present study surveyed 81 participants in order to identify what role communication technology, such as social media and text messaging, plays in romantic relationships. Many studies on this topic have been limited to undergraduate college students, but the present study included many individuals of different ages with 13 participants between 18 and 21, 42 participants between 22 and 25, 13 participants between 26 and 35, and 13 participants over 35. The results indicate that while looking at a partner's social media profile is associated with negative aspects in a relationship, text messaging is associated with positive aspects for a relationship. This could be explained by social media profiles representing a more passive form of communication, where an individual is looking at ambiguous information that may be misinterpreted, while text messaging is a more direct form of communication that can bring a couple closer together. This study has limitations and could be expanded in future research through qualitative and other data that help explain the motives for one's social media and cell phone use.

**Name:** Andrew Osso

**Title:** Video Games and Math Achievement: Is There a Relationship?

**Faculty Advisor:** Professor Carolyn Springer, Professor Pamela Buckle Henning

**Abstract:** Achievement tests are intended to measure an individual's "level of skill, accomplishment, or knowledge in a specific area." (Cherry) This study is intended to determine whether or not a relationship between math achievement scores and video games are present. In this study Minesweeper and Solitaire are used as a video game for a pre-testing condition. The participants then complete a math achievement test designed to correlate with the SAT Math section (The MAC). The participants are all college students at Adelphi University who are not younger than eighteen (18) years. Participants were randomly assigned into three groups (Minesweeper Group, Solitaire Group, and Control Group). The MAC scores are anticipated to be lower than the SAT scores in the Solitaire group (an effect of playing a video game) while possibly higher in the Minesweeper group (a priming effect for math).

**Name:** Lakena Outlaw

**Title:** Coding Parent-Child Videotaped Interactions using the Crowell Method

**Faculty Advisor:** Professor Laura DeRose, Professor Cheryl Arbitelli, Professor Marcy Safyer

**Abstract:** Children exposed to varying levels of trauma suffer an impact on their development and/or mental health stability. The Crowell Relationship Assessment (Crowell & Feldman, 1988) procedure measures the caregiver's influence on child attachment behaviors and separation responses. Twenty videotaped interactions of parent-child dyads who participated in the Crowell as part of an Institute for Parenting project will be reviewed and coded. The child's age ranged from 2-4 years. The videotaped interactions consist of a 40-45min session including a free play task, parent-assisted clean up, and structured tasks. Additionally, at the end, a separation occurs, in which the parent leaves the child alone briefly, followed by the reunion between parent and child. The caregiver's and child's behaviors, responsiveness, and emotional affect are scored on a Likert 1-5 scale. Specifically, the coded observations will identify variations in the children's emotion regulation, security, comfort seeking, learning, and self-control. The parent behaviors and affect will be correlated with the child's behaviors and affect. The coded information will show the correlation between attachment classifications and identified behaviors. Coding of the parent-child dyadic interactions will assist in developing effective attachment-based treatment interventions for families at risk.

### **Oral Presentation Undergraduate**

**Name:** Josephine Chuah

**Title:** Exploring the Effects of the Sino-Japanese War

**Faculty Advisor:** Professor Jean Lau Chin

**Abstract:** The Sino-Japanese War of World War II, which is arguably one of history's worst massacres, started when the Japanese Empire forcefully invaded China during the late 1930s. Though this atrocious event took place several decades ago, the effects of the War have shaped the attitudes and feelings of Japanese and Chinese, including those residing in the United States. Yet, there has been a tremendous lack of literature documenting the War and its psychological effects. Several recent political feuds and crises in China and Japan suggest continuing tension between the two nations and people of Chinese and Japanese descent – much having to do with ethnic pride and identity. The Sino-Japanese War mirrors the inhumanity that has influenced public policy within the U.S., toward those of Asian descent such as Japanese internment camps and the establishment and abolishment of America's Chinese Exclusion Acts. A summary of qualitative research, involving several interviews with Japanese and Chinese Americans these issues.

**Name:** Sarah Stevens

**Title:** Gender Discrimination: a Global Perspective

**Faculty Advisor:** Professor Francine Conway

**Abstract:** As Americans, we pride ourselves on our outstanding progress towards gender equality. When we see the struggles of women around the world, we blame their culture and assure ourselves that such harmful attitudes would never flourish in the United



States. Yet, in truth, we are all members of a global community, and all of our cultures influence each other. To encourage awareness of the challenges women face around the world, this presentation focuses on gender discrimination as observed by an Adelphi psychology student during her travels through Central America. The purpose of this presentation is to encourage the average citizen to take part in improving the world: to find ways to promote gender equality throughout the globe while respecting cultural values, and to improve his or her own community through education, advocacy, and service.

## **Poster Presentation**

### **Graduate**

#### **D21**

**Name:** Kristen Capps, Anthony S. J. Mullin

**Title:** Patient crying in psychotherapy: Who cries, and why?

**Faculty Advisor:** Professor Katherine Fiori, Professor Mark Hilsenroth

**Abstract:** The aim of the present study is to further the understanding of who cries in therapy, as well as the relationship between technique with crying behavior in therapy. Assessment intake and feedback sessions for 52 patients beginning psychotherapy at a university-based clinic were coded for discrete crying segments. Data about patient characteristics and process of the session were collected at the time of the session. Therapist's interventions were recorded verbatim and independently rated. Results from a previous study, which rated only the feedback session, informed the current study. Global functioning, degree of emotional dysregulation, Borderline Personality Disorder symptoms, and severity of childhood sexual abuse history were found to be related to crying frequency. In addition, from the results on patient ratings of the session, it could be inferred that patients generally experienced crying as related to feeling that the session was more difficult and problematic. However, it appeared that despite these challenging sessions, the alliance between patient and therapist remained high. That is, the therapeutic alliance was unaffected by crying as there were no significant associations between number of crying events and patient or clinician ratings of alliance, nor differences in alliance between those who cried and those who did not cry. The hypotheses of the present study were informed by these previous findings, and extended to include intake session ratings. In addition to assessing the same relationships found in the previous study, the present study will add the hypotheses that individuals who cry during the intake session will cry during the feedback session. Overall, the current study will further address a significant gap in the clinical literature on crying.

#### **D22**

**Name:** Kathryn Giuseppone

**Title:** Mother-child disagreements in reports of anxiety: Do individual and family factors matter?

**Faculty Advisor:** Professor Laura E. Brumariu

**Abstract:** Research demonstrates low to moderate rates of agreement between children and mothers in endorsement of child anxiety (De Los Reyes et al., 2005). This study

evaluated whether there are differences in child, maternal, and family characteristics between mother-child dyads that disagree versus agree on their reports of child anxiety status.

The sample included 87 children (48 girls,  $M_{age}=11.32$ ) and their mothers. Child characteristics included demographics (age, gender, ethnicity), attachment security, emotional regulation, and conduct problems. Mother's characteristics included anxiety about the child distancing and comfort with the secure base role. Family characteristics included socioeconomic status and family status.

Forty-eight children and 13 mothers reported child anxiety at the diagnosis level. Forty-six dyads agreed and 41 disagreed on child anxiety status. Children in dyads who disagreed compared to children in dyads who agreed on anxiety status were less likely to be Caucasian, and reported lower security of attachment. In addition, children in dyads who disagreed showed more emotion regulation difficulties and more conduct problems. There were no significant child age or gender differences. Regarding maternal characteristics, dyads who disagreed, compared to dyads that agreed, included mothers who reported more anxiety about the child individuating. Regarding family status and SES, there were no significant differences between dyads who disagreed/agreed on anxiety status.

This study extends the literature on sources of error compromising report validity and has an impact on the evaluation and interpretation of childhood anxiety (De Los Reyes et al., 2005).

### **D23**

**Name:** Hadley Johnson, Kathryn Giuseppone

**Title:** Role Confusion in Mother-Adolescent Dyads and BPD Features Among Older Adolescents

**Faculty Advisor:** Professor Laura Brumariu

**Abstract:** Borderline personality disorder (BPD) is associated with a high rate of hospitalization and significant social maladjustment (Gross et al., 2002). Theorists have proposed that features of BPD are related to disturbances in parent-child relationships (Linehan, 1993; Crowell et al., 2009). This study explores aspects of role confusion (e.g., mother's caregiving helplessness and adolescent emotional role confusion with mother) in mother-adolescent dyads and BPD features taking into account the effect of a history of abuse.

Participants were 120 adolescents and their mothers. Consistent with previous literature (Goodman & Yehuda, 2002), adolescents who exhibited more borderline traits also experienced higher levels of a history of abuse. Adolescents' self-reported emotional and instrumental role reversal was not significantly related to BPD traits. Adolescents showing higher levels of disorganization in the attachment relationship and those showing higher levels of hostile-helpless representations of attachment exhibited higher levels of BPD traits. Mothers experiencing higher levels of caregiving helplessness had

adolescents who reported higher levels of BPD traits. Results remained significant after controlling for the effect of abuse.

This study is among the first to examine relations of specific aspects of role confusion in mother-adolescent relationships and adolescent BPD traits. These findings contribute to the small literature on role confusion and BPD traits by documenting that specific aspects of role confusion emphasizing a sense of helplessness in the relationships are relevant for adolescent BPD traits. These findings suggest that it will be important to address adolescents' sense of helplessness in treatment.

#### **D24**

**Name:** Nadia Kuprian, Nili Dahan-Solonomov

**Title:** Could the TV Series “In Treatment” Be an Example of Modern Psychotherapy Integration?

**Faculty Advisor:** Professor Jacques P. Barber

**Abstract:** Aim: Psychotherapy integration is defined as an approach to treatment that goes beyond the confines of a single theory or set of techniques, and there are various ways in which two or more schools of psychotherapy may be combined or synthesized in practice. The goal of this study is to assess how and to what extent psychotherapy integration was implemented in the HBO TV series “In Treatment,” which is considered to be one of the most realistic portrayals of a modern psychotherapy process, both by expert clinicians as well as in the popular media. The hypotheses are a) the first session with each patient will primarily psychodynamically oriented and b) while as the treatment progresses, the therapist will use greater intervention from other theoretical orientations (i.e., the therapist becomes more integrative over time).

Method: Nine sessions of “In Treatment” will be rated by two independent raters using Multitheoretical List of Therapeutic Interventions (MULTI, McCarthy & Barber, 2009) subscales – three therapy sessions with three different patients with the same therapist. The MULTI allows one to derive eight observer scores based on the interventions used throughout treatment (behavioral, cognitive, dialectical-behavioral, interpersonal, person-centered, psychodynamic, process- experiential, and common factors). From the MULTI an observer can identify the therapist's main theoretical orientation and whether components of this orientation change over time.

#### **D25**

**Name:** Maurice Renfro

**Title:** Racial Events Effects on the Relationship in Psychotherapy and the Associated Outcome

**Faculty Advisor:** Professor Jairo Fuertes

**Abstract:** There is much ongoing research about the outcome of psychotherapy. There is also much research about the effects of racial events. With the increase in people seeking therapeutic treatment, the extent to which racial events affect both the therapist and the client is therefore a necessary step in the evolution of understanding therapy, the therapeutic relationship, and its outcome. This study examines patients' experiences with racial events and their effects in treatment. By surveying both client and therapist we gain

insight into not only the outcome of treatment but also the therapy itself as well as the client-therapist relationship. The purpose of this research is to determine whether there is a significant relationship between an individual's experience with racial events and their experience in therapy.

#### **D26**

**Name:** Martina Robotham

**Title:** Postpartum Depression: Case Studies of Mothers in Treatment

**Faculty Advisor:** Professor Michael O'Loughlin

**Abstract:** This is a presentation of preliminary data from a qualitative study. This study uses semi-structured interviews to examine the subjective experiences of women with histories of depression who are currently suffering from and in treatment for postpartum depression. The study also explores the ways in which cultural identity may interact with the participants' interpretation of depression and in some cases, past trauma, and the extent to which their experiences of motherhood are related to their own mothers' experiences. The study was informed by literature on topics including healthy infant development, the preoccupied mother-infant relationship, the effects of postpartum depression on mothers and infants, the internalization of depression, and the intergenerational transmission of depression.

#### **D27**

**Name:** Jade Sanders

**Title:** The Effect of Humor on Implicit Bias

**Faculty Advisor:** Professor Joel Weinberger

**Abstract:** A new field of research have found that despite a decrease in overt racial bias, unconscious bias is still prevalent among most individuals. Even though individuals may not be aware of this bias it can still affect their behavior toward others. The purpose of this study is to see if a race-related topic in the context of humor can decrease unconscious racial bias. The three conditions in the study are race-related humor, non-race related humor and no humor. For each condition response time for stroop tasks were evaluated. The stroop tasks included words that may be associated with negative stereotypes for African-Americans. Data analysis is still in progress, but preliminary results show a slight decrease in unconscious bias in the race-related comedy. Hopefully these results can shed light on how the media and pop culture can affect unconscious biases.

#### **D28**

**Name:** Nili Solomonov, Nadia Kuprian

**Title:** The Use of Therapeutic Techniques in Prototypical Demonstrations of Cognitive-Behavioral Therapy, Psychodynamic Therapy and Emotion-Based Therapy as Presented in APA Videotapes

**Faculty Advisor:** Professor Jacques P. Barber, Professor Sigal Zilcha-Mano

**Abstract:** Aim: Although many studies have examined the effectiveness of different psychotherapy approaches, few have presented quantitative-based description of the techniques used by these approaches. This paper examined whether expert therapists conducting prototypical demonstrations of certain therapeutic approaches use exclusively

interventions consistent with their own approach, excluding all other approaches.

**Method:** Recently, The American Psychological Association has released tapes demonstrating three major contemporary therapeutic approaches: Cognitive- Behavioral therapy performed by Judith S. Beck, Emotion-Focused therapy by Leslie S. Greenberg, and Psychodynamic therapy by Nancy McWilliams. In these tapes, each expert conducts one session with a male client and one with a female client. The therapeutic techniques used by the experts were rated by two independent raters using “The Multitheoretical List of Therapeutic Interventions” (MULTI). The MULTI assesses interventions from eight different psychotherapy orientations (Behavioral, cognitive, dialectical behavioral, interpersonal, person centered, psychodynamic, process- experiential, and common factors) (McCarthy and Barber, 2009). We hypothesized that each therapist will use most frequently techniques consistent with their own approach and that therapists will be fairly consistent in their use of techniques with the two clients. We further hypothesized that all therapists will use a moderate amount of common factors techniques.

**Results/conclusions:** Findings will be presented and explanations of how expert clinicians use therapeutic techniques will be discussed.

## **D29**

**Name:** Ljiljana Zecevic

**Title:** Interrelatedness of risk factors in a sample of individuals with a history of suicidal behavior

**Faculty Advisor:** Professor Kate Szymanski

**Abstract:** Independent lines of research identified insecure attachment, life meaningfulness, and psychological distress as risk factors in suicidality. Present study examined interrelatedness of these three factors among individuals with suicidal history (HSA). Here, interrelatedness between insecure attachment and psychological distress was found within HSA group, and between secure attachment, meaningfulness and psychological adjustment within non-HSA group.

## **Poster Presentation**

### **Undergraduate**

## **D1**

**Name:** Rebecca Aniboli, Mariam Ayvazyan, Paola Castrillon, Brittany Evans, Erica Fulgenzi, Kelly Heinz, Sonam Kapoor, Nicole Lantier, Nicolette Makedon, Megan Moxey, Imani Robinson, Gregory Sammartano, Shantel Usher

**Title:** Applying our Knowledge and Skills: Student Research Projects from Practicum in Experimental Psychology

**Faculty Advisor:** Professor Carolyn M. Springer

**Abstract:** This poster presents the on-going research projects of students enrolled in Section 004 of Practicum in Experimental Psychology. This interactive capstone experience for undergraduate psychology majors builds upon students’ knowledge of research methodology and statistics and provides them with a venue for independently designing and conducting their own research study. Students will discuss their progress to date in devising, implementing and analyzing data from their research studies which span

a variety of areas in the field including developmental psychology, social psychology, educational psychology, personality, health psychology, forensic psychology and cognitive psychology.

## **D2**

**Name:** Philicia Benigno

**Title:** Bosses and Bullying within College Age Students

**Faculty Advisor:** Professor Carolyn Springer

**Abstract:** The purpose of this research is to evaluate the experiences of college students with bullying in the workplace with a focus on tactics used by bosses and how students cope with bullying. I distributed on-line surveys to college students who are currently employed and work more than ten hours per week either on campus or off campus . Previous research has been included to show the prevalence of bullying with the modern workplace.

## **D3**

**Name:** Kristina Cotroneo

**Title:** Facial Feedback Hypothesis, Empathy and Faces

**Faculty Advisor:** Professor Susan Petry

**Abstract:** The Facial Feedback Hypothesis is an automatic unconscious mimicking response to emotional faces thought to underlie the experience of empathy. There is a debate in the literature in whether extroversion enhances the empathic response. In the present experiment, using photographs of facial emotional expressions we were able to measure the extent to which empathy is induced by positive (happy) or negative (fear) emotional expressions. In addition we manipulated age (children versus young adults) and gaze (direct versus averted). Participants were asked to complete the Toronto Empathy Scale, NEO-FFI (Neuroticism and Extraversion scales only) as well as look at publicly available photographs of various females' expressing these emotions and rate their emotional response (how much emotion they felt when looking at photographs). Preliminary results suggest three main effects. First, photographs of children elicit greater emotional response than adults. Second, there was a larger emotional response to the expression of fear than happiness. Lastly, there was a small main effect for gaze direction, direct greater than averted. In addition we found effects for level of empathy, level of extroversion and gender. People who scored high in empathy felt significantly more to photographs of younger individuals than those scoring low in empathy. Extroverts tended to overall score higher on empathy although the range on the extroversion scale was limited. Extroverts show greater response than introverts; significant for four of the eight stimulus categories. Women have more empathy than men in respect to fear stimuli. No significant results for neuroticism were found, suggesting that the emotional response was more of a protective response rather than driven by anxiety. A more complete analysis is being undertaken. It will be particularly interesting to see the extent to which the subcategories make a difference.

#### **D4**

**Name:** Kathryn Coyle

**Title:** The Relationship between Facebook Use and Emotional Well-Being as Moderated by Interpersonal Relatedness among College Students

**Faculty Advisor:** Professor Katherine Fiori

**Abstract:** Facebook, the staple of social media, has made us more densely networked than ever. Yet for all this connectivity, new research suggests that Facebook can be detrimental to an individual's emotional well-being (Lou, 2009). The majority of the Facebook population has never been lonelier or more depressed (Spragginss, 2009). Incidentally, the loneliness and depression are particularly problematic among young adults (Skues, Williams & Wise, 2012). However, little research has empirically demonstrated what types of individuals are more susceptible to the detrimental impact of Facebook. For example, do those who have an abundance of strong interpersonal relationships emotionally benefit more from this social networking website than do those who have fewer interpersonal relationships? The purpose of this study is to examine interpersonal relatedness as a moderator of the association between Facebook use and emotional well-being among college students.

Participants for this study were recruited from an online research subject pool of undergraduate students. Participants were asked to complete a questionnaire that consisted of: an 8-item survey regarding their Facebook use, a 40-item survey regarding their interpersonal relatedness, and five brief scales that assesses their emotional well being (depression, self-esteem, happiness, loneliness, and overall life satisfaction). It is hypothesized that among participants who score high on interpersonal relatedness, the association between Facebook usage and emotional well-being will be significant and positive, whereas for those participants who score low on interpersonal relatedness, the association will be significant and negative. The results from this study will contribute to the mental health field, by improving mental health professionals' understanding of the individual differences in the association between social networking sites such as Facebook and emotional well-being.

#### **D5**

**Name:** Jacquelyn Diaz, Max Brown

**Title:** Depression within bullies

**Faculty Advisor:** Professor Francine Conway

**Abstract:** Children everywhere frequently experience some form of bullying, whether they are in school, or even within their home. The consequence bullying has left on children is often found to be irrevocable. This study is aimed at projecting the correlation between depression and bullying. A bully is typically defined as an individual who uses superior strength or influence to intimidate someone, typically to force him or her to do what one wants. Whether it is a physical or emotional attack, why would one child intentionally want to hurt another child? This study takes an in depth look at bullying and the relationship with unhappiness and depression. The study is a questionnaire in which children are asked about whether or not they have been bullied or bullied someone within the last six months. Similarly, we were interested in the frequency in which they felt unhappy and/or depressed. Research indicates that there is a strong correlation with depression and happiness within the individuals who are considered to be the bully.

## **D6**

**Name:** Victoria Gonsalves

**Title:** Facial Qualities Through Life

**Faculty Advisor:** Professor Susan Petry

**Abstract:** The study that has been created is intended to measure facial characteristics throughout a lifespan. The study is a self-report questionnaire that is completed while looking at a set of 48 pictures. The pictures were taken from The Oxford Project, a book which consists of photographs of residents living in Oxford, Iowa. In the study, 24 of the pictures consist of residents in 1984 and the other 24 pictures are of the same residents in 2005. The characteristics being looked at in the study are apparent age, attractiveness, wisdom, intelligence and happiness. Attractiveness, wisdom, intelligence and happiness were all rated on a scale from 1-7. Apparent age was recorded from the judgment of the participants. It was hypothesized that attractiveness will correlate with young age and intelligence will show a significant relationship with old age. The results are currently being analyzed to determine if there are other correlations from the photos of 1984 and 2005.

## **D7**

**Name:** Kathryn Graham, Nathalia Aguilera, Sarah Stevens

**Title:** Attachment, Cancer, and Wellbeing

**Faculty Advisor:** Professor Laura Brumariu

**Abstract:** Attachment theory provides a framework from which to understand the wellbeing, modulation of distress, and coping in cancer patients (Feeney, 2000) and suggest that securely attached individuals may be better able to cope with stress. A cancer diagnosis is a threatening event that is likely to activate attachment behaviors (Bowlby, 1969). The purpose of this study was to critically evaluate the associations of a cancer diagnosis with attachment in romantic/close relationships and parent-child attachment. We conducted an extensive search using psychological databases and we identified eight articles. Six studies focused on romantic/close relationships and two studies focused on parent-child attachment. All eight studies relied on attachment questionnaires. Six studies were cross-sectional and two studies were longitudinal.

The results show that the secure attachment is associated with lower levels of depression and higher levels of spiritual wellbeing in adults with cancer. Patients with a cancer diagnosis demonstrate higher levels of avoidant attachment in romantic/close relationships. Further, the results showed a significant and positive link between anxious and avoidant attachment styles in close relationships and pain catastrophizing. Regarding parent-child attachment, two studies showed that children of patients with cancer demonstrate higher levels of anxious attachment.

These emerging studies suggest that a secure attachment may be related to higher levels of wellbeing, while insecure attachment may pose a risk for difficulties managing distress associated with cancer. To further explore the link between attachment, cancer, and wellbeing more studies are needed, particularly longitudinal, as surprisingly there are few studies pertaining to the topic.



## **D8**

**Name:** Jeremy Grant

**Title:** Examining How Ethnicity Influences One's Academic Experiences and Perceptions

**Faculty Advisor:** Professor Jennifer Durham

**Abstract:** In the field of Psychology, the existence of a racial academic achievement gap has been a prevalent concern. There is a volume of research pertaining to the effects that stigma has on both the perceptions and academic performance of minority students. Research supports the idea that particular factors affect a minority student's ability to perform academically, and attempts to establish a relationship between those factors and examines the subsequent performance of minority students. These factors are believed to cause minority students to feel insurmountable pressure, leading to issues including: disidentification with academics (Osbourne, 1997), outgroup discomfort (McGill, Hughes, Alicea, & Way, 2012), lower academic outcomes, and detrimental perceptions regarding self-worth (Walton, & Cohen, 2007). Although stereotype threat, or the risk associated with confirming a negative stereotype concerning one's group, is at the crux of this research (Steele & Aronson, 1995), it is still unclear how and when these factors initially manifest and their trajectory in relation to academic performance. The present study examines the nature and etiology of the perceptions of middle school students of African descent regarding race and academic performance. Although there is significant literature about the role of race in academic performance outcomes, there is a paucity of work about the development and progression of belief systems of minority youth regarding this matter.

The data results serve as the basis for the development of a theory regarding the etiology of the perceptions held by the participants concerning their ethnicity, and what ramifications they believe result from their ethnic affiliation. The salient themes stemming from this study include stigma consciousness and the significance of psychosocial interventions. This study seeks to further establish knowledge advocating the use of stereotype reduction based psychosocial interventions.

## **D9**

**Name:** Kristen Guarasci, Kristina Mastrandrea, Kelsey McLaughlin, Jennifer Mormon, Sofia Rajabali, Christopher Roskosky, Jennifer Safon, Alexandra Sprance, Jenny Volkers, Kimberly Breen, Anne Giovanniello, Elaina Kalantzopoulos, Chela Knight, Amanda Maggio, Emily Tuohy

**Title:** Ongoing Research Projects in Practicum in Experimental

**Faculty Advisor:** Professor Susan Petry

**Abstract:** Presented here are short descriptions of research being done by students in the psychology class Practicum in Experimental Psychology (both Fall 2013 and Spring 2014). Students are present to discuss their work. They are working on several projects including analyzing early memories; predicting attitudes towards school through analysis of six-year-olds' handwriting; deception, malingering and little white lies; non-verbal sex differences in deception. Additional research concerns include: how to get OR get out of a speeding ticket [an analysis of police attitudes]; face-recognition and judgment of school-age children; you are what you wear: factors affecting clothing choice; and the

relation between academic success and fourth-graders video habits and writing. Other projects include body-image and self-criticism in dancers and athletes; color preferences and emotional responses; factors contributing to the pressure to marry; confidence with and without make-up; the ability of 3, 6, and 8-year-olds to identify emotions; and differences in men's and women's drawings of themselves in a group.

### **D10**

**Name:** Brandon Joachim

**Title:** Unconscious Habituation: Reduction of Avoidant Behavior Using Brief Exposure Subliminal Imagery of Related and Unrelated Fearful Objects

**Faculty Advisor:** Professor Joel Weinberger

**Abstract:** This study continues to test the hypothesis of whether subliminal images of another feared stimulus, like a snake, will evoke an immediate reduced avoidance effect toward the feared object, in this case, a tarantula (Gallo and Weinberger, 2013). This study adds to the behavioral and neuroscientific literature demonstrating the activation, conditioning and evoked responses of fear by masked phobic and fear-related stimuli (Carlsson et al., 2004; Katkin, Wiens, & Öhman, 2001; Öhman & Soares, 1994, 1998; Morris, Öhman, & Dolan, 1998, 1999; Phelps, 2005; Whalen et al., 2004; Williams, Morris, McGlone, Abbott, & Mattingley, 2004). It can also assist in exposure therapy, the preferred method of treatment for simple phobias (Weinberger, Siegel, Siefert, & Drwal, 2011), by providing empirical data that may help in the development of an efficient alternative treatment to traditional exposure therapy, circumventing its often discomforting effects. We operated under the hypothesis that images of the snake would not elicit the same approach towards the tarantula, as would subliminal images of spiders.

### **D11**

**Name:** Fallon Kane, Conor Smith, Gregory Sammartano

**Title:** An Exploration of the Relationship Between Physical/Geographical Location of Populations and Trends of Anxiety

**Faculty Advisor:** Professor Francine Conway

**Abstract:** Anxiety is among the most common psychological illness diagnosed in adults, affecting approximately 18 % of adults at some point in their lives. This normal physiological and mental reaction to stress becomes an issue when its effects are so overwhelmingly frequent and powerful that they interfere with everyday functioning. This study looked at how levels of use of medications for anxiety and self-reports of anxiety vary across regions of the United States, as well as among different metropolitan areas, and speculates on reasons for the disparities. Data collected by the Integrated Health Review Series over the past decade was reviewed to test for differences in anxiety levels among rural and non-rural patients. It was expected that there will be higher levels of anxiety in the cities versus the rural areas, based on factors such as lack of green space, lower subjective quality of life, an abundance of high-stress jobs, and others factors that cause anxiety; and that anxiety levels will be higher in less community-oriented areas of the country, such as the northeast, even when controlling for the rural/urban divide. Further reasons for these differences are explored.

**D12**

**Name:** Sonam Kapoor

**Title:** Emotionally Disturbed Children Integrated in Mainstream Classes

**Faculty Advisor:** Professor Francine Conway

**Abstract:** This poster board will display my experience at Nassau BOCES as a psychology intern. My opportunity of the time spent at Stokes Elementary School, where the children from BOCES mainstream, will be exhibited, and the history of the agency will be discussed. An inside scope of my clientele population will be examined, and different literatures on the type of population will be distinguished. My role, and the role of my supervisor at the agency will be presented, and a recent case summary of my experience will be analyzed. Finally, the ethnic diversity at my internship site, and my reflection on my experience will be observed.

**D13**

**Name:** Bianca Lastra, Liana Rodriguez, Kimberly Velazquez

**Title:** Attachment and Borderline Personality Disorder: Is there an association?

**Faculty Advisor:** Professor Laura Brumariu

Graduate Assistant, Katie Giuseppone

**Abstract:** Insecure attachment has been proposed as a vulnerability factor predisposing an individual to unregulated arousal and borderline personality disorder (BPD, Lyons-Ruth et al., 2003). The purpose of this review is to evaluate the relation of romantic/close relationships and parent-child attachment with BPD symptoms and diagnosis in both clinical and nonclinical populations. Because anxious/preoccupied/ambivalent attachment is characterized by fear of abandonment and exaggerated display of emotions and avoidant attachment is characterized by minimization of emotion and neutrality, we hypothesized that anxious/preoccupied/ambivalent attachment rather than avoidant attachment will be related to BPD (Cassidy, 1994; Scott et al., 2009). Further, we expected that disorganized attachment would be related to BPD as well since individuals with BPD often had caregivers whose behaviors, such as being emotionally withdrawn and over controlling (e.g. Zanarini et al., 1997), are consistent with a disorganized attachment relationship.

A comprehensive search of databases was conducted and 17 peer-reviewed empirical articles were retained. 70.5% of the studies included a predominantly Caucasian population, and 76.5% were cross-sectional. 58.8% of studies assessed attachment in romantic/close relationships and 64.7% assessed BPD diagnosis. As predicted, anxious/preoccupied/ambivalent romantic attachment and disorganized parent-child attachment were more frequently associated with BPD than secure or avoidant patterns of attachment.

Results suggest that more longitudinal studies, based on a diverse population, are needed. Nevertheless, our findings underscore the importance of romantic/close relationships attachment and parent-child attachment in relation to BPD features.

**B14**

**Name:** Robin Lehrman

**Title:** Preschoolers' Differentiation of Basic Human Emotion in Music

**Faculty Advisor:** Professor Dana Boccio

**Abstract:** In the present study, 3- and 4-year-old preschool children were recruited from an early learning center located on the campus of a mid-sized northeastern university. Each participant was given a four-page packet developed by the researchers, called the Music and Emotions Scale. Each page of the packet portrayed four cartoon faces, corresponding to the following emotions: happy, sad, angry, and scary. Participants listened to four brief pieces of instrumental music, each determined through pilot testing to capture one of these four emotional states. After each piece, participants were asked to circle the cartoon face that best represents the emotion expressed in the musical composition. Undergraduate students selected from an introductory psychology course at the same northeastern university served as a comparison group for this study, since it was anticipated that their accuracy on the emotion identification task would be reasonably high. The purpose of the present study was to assess preschoolers' ability to differentiate basic human emotions conveyed through musical compositions. It was hypothesized that three- and four-year-olds would be able to identify basic emotions such as happy and sad, but would have difficulty distinguishing between somewhat similar negative emotions, such as scary and angry. Data collection is currently in progress. Once data are obtained, each age group's responses will be subjected to chi square analyses to determine precision in emotion recognition. The results of this study will contribute to the knowledge base underlying music therapy. Results will also be used to offer recommendations for mental health professionals interested in incorporating music therapy techniques into their practice with preschool populations to facilitate the exploration of strong emotional experiences.

### **B15**

**Name:** Kelsey McLaughlin

**Title:** Psychological Wellbeing among College Students Diagnosed with ADHD

**Faculty Advisor:** Professor Francine Conway

**Abstract:** Students with a diagnosis of Attention Deficient Hyperactivity Disorder (ADHD) may experience difficulties in their transition to college. This exploratory study was designed to examine the students' psychological and learning adaptations to academic life. A focus group of full-time college students with an ADHD diagnosis were recruited and students' perceptions of their learning, self-esteem, and coping skills were assessed and analyzed using qualitative (Atlas-ti) methods. Implications for ADHD services are discussed.

### **B16**

**Name:** Viviana Petreanu

**Title:** Effects of Exercising, Tai Chi and Yoga on College Students' Sleep Quality

**Faculty Advisor:** Professor Carolyn Springer

**Abstract:** Quality of sleep has been of much concern during recent years. Current research indicates that today's college students are not getting enough sleep and that about one in four adults residing in the United States do not get enough sleep (Healthy People 2020). Clinical studies have shown tai chi to be effective in improving quality of life in patients with chronic heart failure, improving aerobic capacity in sedentary adults, reducing hypertension, and improving quality of sleep in older adults. Yoga has been beneficial for weight maintenance, diabetes, migraine, AIDS, and depression (Memorial

Sloan-Kettering Cancer Center, 2013). The study investigates what effects yoga and tai chi have on college students and whether or not such exercises are effective in improving the quality of sleep. To date, data has been collected on 34 college students attending a Northern university. Students were asked to complete a 25 minute questionnaire involving demographic questions, health status questions, exercise habits, and questions about their utilization of yoga/tai chi. Measures used were Ryff's Scales of Psychological Well-being and the Pittsburgh Sleep Quality Index (PSQI). Students ranged in age from 19 to 41 years (M=21.5 years, SD=3.90). Eighty-two percent of the sample was female. The majority (62.5%) of the sample was Caucasian, 18.8 % were Asian, 9.4% were Latino, 6.3% were multiracial and 3.1% were African-American. Most of the sample were graduate students (41.7%) or sophomores (38.2%). Fifty-two percent of the sample rated their health as very good or excellent. Among the students, 47.1 % had taken a yoga class and 17.6% were currently practicing. Students perceived their overall quality of sleep to be very good (19.4%), fairly good (51.6%), fairly bad (19.4%) and very bad (9.7%). Results from this study can provide a more thorough comprehension of college students' sleep habits and whether or not exercise can provide better quality of sleep for college students.

### **B17**

**Name:** Lisa Rabinovich, Celeste Graziose, Kaitlyn Nuzzi

**Title:** The Fleeting Life: A study on the relationship between social support and mortality in people 65 and older

**Faculty Advisor:** Professor Francine Conway

**Abstract:** A long life, as well as a fulfilling life, has been linked to good habits and adequate social support. The idea being, the more people one has surrounding him/her the healthier he/she will be, thus the longer he/she will live. However, can this theory delve into the notion of mortality and how certain kinds of social support systems can either hinder or build life expectancy? This research project examines the relationship between social support and mortality amongst older people ages 65 and over. By using the IHIS Integrated Health Interview Series, the researchers were able to collect data that brings to light certain variables such as: health conditions, family size, as well as how often said population speaks to or interacts with their children. The participants of the study were males and females 65 and older within a decade gap. The results of this study will provide a more coherent understanding of both the meaning of mortality, as well as how social support can both hinder and benefit the older population.

### **B18**

**Name:** Jay Rosenthal

**Title:** A Quality of Life Assessment of a Patient with Late-Onset Tay-Sachs Disease: An Exploratory Study

**Faculty Advisor:** Professor Lars Ross, Professor Rebecca Curtis

**Abstract:** Tay-Sachs Disease (TSD) is a rare, inherited lysosomal storage disease that decreases functionality of a vital enzyme responsible for clearing waste materials out of brain cells, resulting in progressive brain damage and associated widespread decline in functions of the central nervous system including psychiatric symptoms. The late-onset form (LOTS) presents in adolescence or adulthood and is associated with slower disease

progression. Nevertheless, patients report a significant decline in their perceived quality of life over time which poses an increasing demand for services targeting not only palliative, but also psychosocial treatments. The development and implementation of psychological interventions necessitates an understanding of psychosocial issues typically experienced LOTS patients, but so far no systematic studies have been reported in the literature. This first exploratory study is targeted at filling this void in assessing disease related symptoms and their relationship to psychosocial issues in one patient with Late-Onset Tay-Sachs Disease. Understanding these psychosocial aspects may help clinicians unfamiliar with the disease provide more effective psychotherapy and improve patients' quality of life.

### **B19**

**Name:** Jonathan Sclar, Michael Spinella, Elizabeth Eickelberg, Jennifer Yu

**Title:** Alcohol and Physical Activity

**Faculty Advisor:** Professor Francine Conway

**Abstract:** Obesity in America has been a wide spread issue for many years. A lot of the blame is put on fast food chains such as McDonalds, Burger King, Wendy's and other restaurants of the same origin. However, there are many other factors we believe can be attributed to the obesity problem. There is a gap of research when it comes to alcohol and obesity. Specifically, how alcohol use affects physical activity. Using a national data set, Integrated Health Series Interview, our research will examine the relationship between alcohol use and physical activity within the United States by studying four main regions. These regions include the Northeast, South, West, and Northwest/Midwest. We will examine the frequency of alcohol consumption throughout the year as well as the frequency of moderate physical activity throughout the year. The results will be determined by using the ANOVA test. It will compare the correlation of how much alcohol is consumed in each region, as well as the amount of exercise performed. With this study, we hope to address one area that adds to the obesity levels in America. Additionally, we hope that our research will act as a precedent for more research in this field.

### **B20**

**Name:** Kristen Sylvan

**Title:** Bridges To Adelphi Program Internship Experience

**Faculty Advisor:** Professor Francine Conway

**Abstract:** This report looks at the Bridges to Adelphi Program. Bridges to Adelphi supports students who are enrolled at Adelphi University and have self-disclosed diagnoses of Autism Spectrum Disorder, Social Anxiety and other Nonverbal Learning disabilities. Since the publication of the DSM-V all of the subtypes of Autism Spectrum Disorder such as Asperger's Syndrome, Childhood Disintegrative Disorder, Rhetts Disorder and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) have been condensed and all are considered Autism Spectrum Disorder. The students enrolled in the Bridges Program were diagnosed prior to the change in the diagnostic criteria so many of them were diagnosed with Asperger's Syndrome or PDD-NOS. For the purpose of consistency and to stay with the current literature, all of these students will be classified as having Autism Spectrum Disorder throughout this report. Bridges to

Adelphi serves students with various disorders but this report will specifically look at the diagnosis of Autism Spectrum Disorder, how it manifests itself and how the Bridges To Adelphi Program provides support to the individuals enrolled in the program.

**Social Work**  
**Oral Presentation**  
**Graduate**

**Name:** Elisabeth Counselman-Carpenter

**Title:** The cat ate my consent form: strategies for managing unexpected challenges while conducting qualitative interviews at home

**Faculty Advisor:** Professor Roni Berger

**Abstract:** Conducting qualitative research can have many surprises for researchers. Flexibility in managing the unexpected is encouraged in order to develop theories in qualitative research (Glaser & Strauss, 1967). In particular, the unexpected can develop during the interview process. Interviewing a participant at home addresses the 'hows' and 'whats' sought in a qualitative study because the interviewer is literally where the client 'is' for the home is a symbol of identity, self and familiarity (Fontana & Frey, 2005, Hamalainen & Rautio, 2013).

Home interviews are thought to encourage the collaborative process between researcher and participant more so than other locales. Prior research indicates home interviews are more successful than other locations due to a higher level of commitment from the participant, the experience of increased privacy, and the trust extended with the invitation (Hamalainen & Rautio, 2013). However, home interviewing can create an ethical dilemma in terms of informed consent. Due to the uncontrolled setting, the researcher can't truly explain to the participants what may be examined or included as part of the interview because the researcher can't say what will actually take (LaRossa, Bennet & Gelles, 1981).

My dissertation looks at the lived experience of mothers whose children were born unexpectedly with Down Syndrome. The data gathering process involves one semi-structured interview lasting about 1-2 hours. Often, because the participants are mothers of young children, for convenience the participants requested meeting at their homes. This interviewing experience has led to a number of surprises and unexpected challenges unique to the qualitative data gathering experience. I will share my actual experiences as well as the meaning making that has resulted and the findings these experiences have provided. The findings include experiences with frequent, unusual interruptions, destructive pets, stolen car keys and deceased family members.

**Name:** Kimberly Garrett

**Title:** Am I My Brother's Keeper? Investigating the Incidence of Sibling Violence in American Families

**Faculty Advisor:** Professor Roni Berger

**Abstract:** Sibling abuse or sibling violence is a common, but under researched aspect of family dynamics. Due to cultural norms, and the idea that sibling rivalry is viewed as normal, much of the incidence of sibling violence is overlooked. This paper will discuss destructive sibling conflicts, using the tenets of conflict theory, and identify gaps in existing research, followed by a brief proposal to address existing gaps in research. Learning more about this phenomenon would allow for social workers, and other mental health professionals working with families to understand the severity of the phenomenon, as well as develop interventions for children who are both perpetrators and victims of sibling abuse.

**Name:** Eunkyung Lee

**Title:** Who supports social welfare? : Americans' welfare attitudes

**Faculty Advisor:** Professor Elizabeth Palley

**Abstract:** The ideological preferences of citizens contribute to dynamics of social, political, and economic institutions in a nation. Previous research has investigated how public opinion regarding distributive justice and government social expenditure is different in different welfare states. Citizens in more progressive welfare regimes tend to have more favorable opinions of public benefits than those in less progressive states. The former studies, which compared country-level means of welfare attitude based on citizen opinions, ignore individual-level variables that influence the formation of welfare attitude. This study is based on the hypothesis that individuals within countries have different attitudes toward welfare based on their socio-demographic characteristics. Therefore, this research explored individual factors affecting citizens' attitudes toward welfare. This study analyzed the 2,418 US citizens from World Values Survey dataset. Based on Jakoben (2011)'s operationalization, this study collapsed four variables; respondents' views on 'income equality', 'government responsibility', 'privatization', and 'redistribution', to measure overall welfare attitude scores of individuals. Using a t-Test, an ANOVA, and a correlational analysis, this study analyzed the association between welfare attitudes and socio-demographic variables, such as gender, age, education, economic status, and work ethic. The results suggest that several variables affect welfare attitudes. Those who tend to have favorable welfare attitude include women, people with more than a college education, retired individuals, and people with middle income class incomes. Work ethic, age, race, and religious affiliation do not appear to affect welfare attitude. Based on these findings, this study discusses policy implications and makes suggestions for future research.

**Name:** Henshaw Lisa

**Title:** Reciprocity and Relief: A Historical Analysis of Psychosocial Trauma and the Social Work Profession

**Faculty Advisor:** Professor Carol S. Cohen

**Abstract:** This critical review of historical literature focuses on the complex and evolving relationship between the social work profession and psychosocial trauma over a 50 year period from the early 20th century. Throughout the history of the profession, social workers have been meeting the needs of individuals affected by psychosocial trauma. At the same time what has received little attention but is certainly of interest, is



how the profession of social work has been influenced by the work in this area of practice.

Primarily using original source material, this research includes newspaper articles and historical accounts, conference proceedings and scholarly articles and books. This paper presentation will provide an in-depth view from pioneers in social work who laid the foundation for the profession. Through the use of historical research methodology, analysis of seminal pieces of writing and proceedings from major conferences will uncover this significant relationship.

The profession of social work and the field of psychosocial trauma have intersected numerous times throughout history, marked by different social, cultural and political events and themes, including: the development of The National Committee for Mental Hygiene in 1909, World War I, the establishment of the US Veterans Bureau, The Great Depression, World War II, and the Mental Health Act of 1946. Social workers have advocated for the rights of trauma survivors throughout the duration of these historical socio-cultural events, with significant contributions in theory and practice.

Social work struggled for professional recognition and diligently worked to develop as a profession working alongside the psychiatric and nursing professions. However, the needs of this population largely influenced the advancement of professional development opportunities for social workers through the establishment of academic and training programs founded to treat individuals affected by psychosocial trauma.

**Name:** Kristina Monti

**Title:** The Social Work Professions' Role in the Racialization of Substance Users: 1920 - Present

**Faculty Advisor:** Professor Judy Fenster

**Abstract:** Throughout the past century, social policies towards substance users have been racialized to fit the needs of mainstream society or the political climate at the time (Reinarman, 1994). Beginning with prohibition and the targeting of immigrant Americans, through mass incarceration of alcoholics, socially constructed “drug scares”, often politically driven and targeting certain ethnic populations, have been utilized to distract from larger mainstream issues in society. These “drug scares” or moral panics have continued to exist for decades, inclusive of the “war on drugs” and the mass incarceration of black and Hispanic Americans (Alexander, 2011). Coinciding with the racialization of substance users, the social work profession has had to establish its role in response to these social policies while delicately balancing our social work code of ethics (McVinney & Phil, 2004).

This presentation provides a comprehensive analysis of U.S. drug policy through the lens of differential racialization and the role of the social work profession in either substantiating the discriminatory policies or advocating against them. Differential racialization, a tenet of Critical Race Theory, is operationalized as society’s ability to favor or negatively racialize minority groups based upon societal needs at the time (Delgado & Stefancic, 2001). For each time period, 1920-1944, 1945-1971, 2000-present, differential racialization will be utilized in the analysis of drug policies and their impact

on specific ethnic groups. At the conclusion of each period, social work's role in mitigating these policies, on both a micro and macro level, will be examined. Implications of recent trends in drug use and treatment, such as the continued discrimination experienced by ethnic minorities through "stop and frisk" policies, are noted. Recommendations for social work policy and practice are discussed.

**Name:** Ohiro Oni-Eseleh

**Title:** Relationship Between Quality of Internship and the Degree of Post-Graduation Job Readiness: A Case Study of Master of Social Work Graduates

**Faculty Advisor:** Professor Godfrey Greg

**Abstract:** Much of social work practice and scholarship is client focused. Even as the scope of social work research widens, there remains a significant paucity of work focusing on the practice knowledge of social work practitioners – how it is acquired and used, what is effective and why, and what informs the practice decisions that individual social work practitioners make daily. While all social work students are required to undergo internships prior to graduation at the undergraduate and graduate levels, the relationship between such internships and job readiness post graduation requires study. This proposed presentation will focus only on graduate internships and whether or not graduate social work internships are effective in preparing new graduates for entry into social work practice. The current scarcity of studies in this area raises significant questions. First, how do we know that social work internship has the effects that we think it does? Secondly, how can we be sure that all internships placements produce in students the effects intended by the Council of Social Work Education, the National Association of Social Workers and the universities and colleges that place students at internship sites? Using a case study approach, the proposed study will explore the following question: Is there a relationship between the quality of an internship and the degree of post-graduation job readiness among Masters of Social Work graduates?

**Name:** Colleen Smalley, Joanna Contreras

**Title:** The Relationship Between Violence and Reproductive Health Among Immigrant South Asian Women Survivors of IPV

**Faculty Advisor:** Professor Subadra Panchanadeswaran, Professor Tiloma Jayasinghe

**Abstract:** Globally, intimate partner violence (IPV) continues to be recognized as a serious social and public health issue. Scholars in the past have also drawn attention to the impact of violence on women's sexual and reproductive health. In the context of IPV, women have often been viewed as passive victims instead of active change agents, especially immigrant women. Research on these intersecting issues among immigrant South Asian survivors of IPV in the United States is sparse. The goal of this qualitative study is to explore the ways in which personal agency manifests among immigrant South Asian women who experience partner violence. Focus group discussions were utilized to obtain information regarding lived experiences of violence, and sexual and reproductive health among immigrant South Asian women. Twenty-two women who were seeking assistance from Sakhi for South Asian women, a not-for-profit organization in New York City, participated in five focus groups. Findings revealed that a complex scenario of multiple forms of violence, including sexual violence and forced sex, impacted women's abilities to make choices surrounding their reproductive health. However, results showed

that despite many odds, survivors used many covert and overt strategies to engage in decision-making regarding their health and seek help from a variety of sources to assert a personal sense of agency. This study points to several implications for social work practice with immigrant South Asian related to addressing barriers to sexual and reproductive health rights. Results also underscore the need to incorporate women's voices and recognize their own efforts in ensuring social justice.

## **Poster Presentation**

### **Graduate**

#### **C7**

**Name:** Elionora Silbersack

**Title:** Exploring mothers' initial discovery experiences of developmental delay or disability in their young children

**Faculty Advisor:** Professor Julie Cooper-Altman

**Abstract:** The purpose of this qualitative study was to expand the scarce information available on how mothers first observe early development in their young children, assess potential problems, and then come to recognize their concerns. In-depth knowledge about mothers' perspectives on the discovery process can help social workers to promote timely identification of developmental delay or disability and facilitate service plans. A phenomenological design was chosen to capture the complexity of meaning within the shared experience of discovery. Data collection included in-person interviews and a follow-up e-mail contact with 18 mothers of children birth to five years with confirmed developmental delays or disabilities. Ongoing comparative thematic analysis led to an outline of the process surrounding mothers' discovery of their children's developmental issues.

The data suggest five major themes unfolding along a discovery timeline: For the majority of the mothers, instinct and close observation of their child's behavior led to an initial AWARENESS of developmental concerns. IDENTIFICATION of delay emerged as the mothers pieced together feedback from informal social networks and formal evaluations. Next their REACTION and responses to a growing recognition of delay or disability prompted advocacy efforts with service delivery representatives in the NEGOTIATION phase. Lastly the mothers considered the meaning of developmental challenges in an APPRAISAL of motherhood and expectation for the future. The mothers' stories revealed discovery of delay or disability in their young children to be an often puzzling and open-ended process. Mothers stressed the need for parents to recognize themselves as expert in their child's development, and to be persistent in voicing concerns to pediatricians and early childhood care providers. Learning how mothers perceive early developmental problems can minimize the lag between concern and intervention, and provide insight into service access.

#### **C8**

**Name:** Mary E. Wightman

**Title:** It's official, hoarding is HD

**Faculty Advisor:** Professor Devin Thornburg

**Abstract:** Although still considered a subtype of obsessive-compulsive disorder (OCD), Hoarding Disorder (HD) is in fact a separate disorder with symptomology not found in OCD or DSM designated anxiety disorders. The potential is that HD has been missed, misdiagnosed, mistreated, or all three. To determine to what extent any of these is the case, clinical research is necessary. The new DSM 5 designation of HD will draw attention to the need for research and clinical work that is a better fit for the diagnosis.