



2014 Spring Fiat Lux

A showcase of Florida Southern College
student scholarship, creative works, and
research

Friday April 11, 2014

Schedule of Poster Presentations

CH LOBBY

12:30 to 1:30

First name	Last name	Title
Callahan	Ceplenski	Sustainability of Illegal Drugs
Brittany	Cowan-Reynolds	Putting a Stop To Hazing
Grace	Gryniewicz	Mitigation Banking
Morgan	Hammett	Targeted Internet Advertising
Ashlea	Middleditch	Attributional Style and Directed Forgetting of Valenced Information
Brian	Miller	GMO? OMG!
Kelley	Wilson	GMO Sustainability and the Environment

1:30 to 2:30

First name	Last name	Title
Kimberly	Gomez	The Effects of Self-Awareness and Self-Esteem on Facial Assortative Mating
Chris	Kyser	Web-based Interviewing: Question Type Preference and Response Quality
Michael	Kyser	The Effectiveness of Transactional and Transformational Leadership Styles in Dyadic Relationships
Larry	Mitchell	Employment Selection Method Preferences: Computer-based Simulation or a Personality Test
Alyssa	Perez	Your Brain on Graphic Novels I
Wei Pin	Teh	Enhancing Atomic Transportation Across Off-resonant Optical Lattice

Schedule of Poster Presentations

CH LOBBY

2:45 to 3:45

First name	Last name	Title
Nicole	Burgess	Your Brain on Graphic Novels II: Enhancing Dynamic Neuroscience Concepts
Benjamin	Burnes	Conservation of the Bluefin Tuna
Nikole	Dangelo	Clothing Conservation
Olivia	Francis	Targeted Internet Advertising
Leo	Huang	Paper-Based Microfluidics For Detection of Nitrite In Water
Jessica	Krystek	Mitigating the Effects of Cheating Behaviors in Collegiate Students
Carolyn	Mays	Agile Development of Mobile Mocs 2014
Amanda	Miller	Children's Preference and Recognition of Different Landscape Photographs
Anne	Telcy	Migration and distribution of capsaicinoids in seasoned beef using microwave-assisted high-performance liquid chromatography

Schedule of Oral Presentations

CH 108

First name	Last name	Time	Title
Alex	Boelke	12:30	Bitcoin - A Property in Stage Alpha
Michelle	Bradshaw	12:45	Queuing Theory: An Application of Probability
Amanda	Royer	1:00	The Effect of Using Exercise Balls in Place of Classroom Chairs on the Behavior and Reading Comprehension of Children with Dyslexia
BREAK			
Kira	Ramirez	2:00	Desegregation Busing: A Case Study of Four Cities
Steven	Bramley	2:30	The Origin of the Hispanic Vote: Identifying a Crucial Voting Group
Jeffrey	Zines	2:15	Defending Dixie: Congressman James A. Haley and the Civil Rights Movement

Schedule of Oral Presentations

CH 109

First name	Last name	Time	Title
Caitlin	Simmons	12:30	Over Prescription of Pharmaceutical Drugs: A Policy Problem
Matthew	Geras	12:45	Low Voter Turnout in the United States
Matthew	Geras	1:00	The Effects of the 17th Amendment on Voter Responsiveness

Schedule of Oral Presentations

CH 206

First name	Last name	Time	Title
Jake	Benoit	12:30	A Conservative Storm
Christopher	Yanichko	12:45	Effects of Atrazine of <i>Xenopus laevis</i>
Jake	Benoit	1:00	Marijuana Reform and Building a Better America
Shawn	O'Keefe	1:15	Part I. Investigation of the Effects of Taurine and Caffeine Supplementation on PPAR-gamma Expression in 3T3-L1 Cells
Shawn	O'Keefe	1:30	Part II. Investigation of the Effects of Taurine and Caffeine Supplementation on PPAR-gamma Expression in 3T3-L1 Cells
BREAK			
Holly	Mader	2:00	Analysis of the Microbial Flora in the Digestive Tract of the Florida Manatee (<i>Trichechus manatus ssp. latirostris</i>)
Christina	Cota-robles	2:15	Every Man Must Have A Code
BREAK			

Schedule of Oral Presentations

CH 206

First name	Last name	Time	Title
Kayle	Randolph	2:45	Relationship of Exercise and Depression
Lauren	Nash	3:00	Minimizing the Elementary Reading Gender Gap: Implementation of Strategies in a School for Children with Dyslexia
Chelsea	Dyer	3:15	Women in Crisis: Mental and Physical Issues in the Criminal Justice System
Tye	Jensen	3:30	Effects of Raspberry Ketones on Chinese Hamster Ovary Cells and 3T3-L1 Cells
BREAK			
Ashley	Myrberg	4:00	The Effects of Eugenol on PPAR γ expression in 3T3-L1 cells
Lauren	Griffiths	4:15	Seasonal Seagrass Colonization Proximal to Restoration Projects
Jaime	LaMar	4:30	MocSpace Collaboratory
Nicholas	Brown	4:45	A policy-based proposal to healthcare and social reform in Niger

Schedule of Oral Presentations

CH 207

First name	Last name	Time	Title
Jason	D'Angona	1:30	Guns
Spencer	Brandon	1:45	The Hegel Bagel
Jared	Goodwin	2:00	Investigation of Bisphenol A Effects on PPAR-gamma Gene Expression in <i>Xenopus laevis</i> Tissue
BREAK			
Carter	Payne	4:00	Deforestation and Poverty in the Brazilian Amazon
Cory	Miller	4:15	A Case Study of Ender's Game: Think of the Children!
Nicole	Oldfield	4:30	A Review of Celiac Disease and the Potential Relationship to an Altered Intestinal Micro biome
Sarah	Andrews	4:45	The Effect of Using Fitness Balls in Place of Chairs on the Behavior and Reading Skills of Preschool Children

Schedule of Oral Presentations

CH 208

First name	Last name	Time	Title
Hunter	Kaiser	1:30	Juvenile Recidivism
Christina	Cota-Robles	1:45	Childhood Obesity Policy
Kate	Stromberg	2:00	Simple Linear Regression with an Application in Biological Research
Dylan	Parvin	2:15	Collective Bargaining In Education
BREAK			
Christina	Cota-Robles	4:00	The Unhealthy South
Erin	Van Landingham	4:30	Digital Design: The Process of Creating an E-book
Lauren	Griffiths	4:45	Medicinal Extraction of Vinblastine and Vincristine from Madagascar Periwinkle (<i>Catharanthus roseus</i>)

Abstracts

Student: Andrews, Sarah

Major: Psychology

Co-presenters: Katie Lawliss

Co-authors: Katie Lawliss, Savannah Douglas

Faculty Mentor: Leilani Goodmon-Riley

Presentation Type: Oral

Presentation Time: 4:45 PM

Room: CH 207

Title: The Effect of Using Fitness Balls in Place of Chairs on the Behavior and Reading Skills of Preschool Children

Abstract: The purpose of this study was to determine if the use of fitness balls as classroom chairs would benefit students both behaviorally and academically. Several researchers have investigated whether the use of fitness balls in place of normal classroom seats improves behavior and learning in children. Researchers have reported that there are many positive benefits to using fitness balls in place of seats such as releasing energy, increasing focus, and improving learning in children with Attention Deficit and Hyperactivity Disorder and Autism Spectrum Disorders (Fedewa, Erwin, 2011; Kercood, & Banda, 2012; Schilling, Washington, Billingsley, 2003; Bagatell, Mirigliani, Patterson, Reyes, & Test, 2010). This study set out to generalize this data to preschool children. In order to determine whether the fitness balls have a positive impact on behavior and reading skills, we employed a repeated measures design by comparing pre-test, baseline measurements (i.e., while using normal classroom chairs) to those collected during the treatment or experimental phase (i.e., while using fitness balls in place of chairs) for both behavioral measures and academic measures. While we found that there was a significant decrease in negative behaviors while sitting on the balls, all other hypotheses were not supported or only approached significance.

Student: Benoit, Jake

Major: Political Science

Co-authors: Carter Payne

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 12:30 PM

Room: CH 206

Title: A Conservative Storm

Abstract: Given the decrease in the population of New Orleans, the large African American population of the city, and the high likelihood of African Americans voting for the Democratic Party, hypothesize that there has been an increase in Republican voters and a decrease in Democratic voters in Orleans Parish, as well as the other parishes in Louisiana most impacted by Hurricanes Katrina and Rita. By examining voter registration data obtained from the Louisiana Secretary of State to test the hypothesis.

Abstracts

Student: Benoit, Jake

Major: Political Science

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 1:00 PM

Room: CH 206

Title: Marijuana Reform and Building a Better America

Abstract: This project is an argument for the reform of the current Marijuana policy in the United States. I will analyze the current policy by utilizing Bardach's eight steps of policy analysis and how bringing of reform will drastically improve the general welfare and well being of the United States. Marijuana prohibition has been in effect in the American government for over eighty years and only in the two decades have become more of a detriment than an assistance to the American public. By decriminalizing Cannabis the United States can restore balance to the irrational and unjustified laws that only harm and not protect its citizens.

Student: Boelke, Alex

Major(s): Business Administration, Economics

Co-authors: William Quilliam

Faculty Mentor: William Quilliam

Presentation Type: Oral

Presentation Time: 12:30 PM

Room: CH 108

Title: Bitcoin - A Property in Stage Alpha

Abstract: Bitcoin technology is a cryptographic protocol, and while people call it a "digital crypto-currency", the IRS has categorized it is a property, rather than a currency. The total number of bitcoins is fixed at 21 million, which causes the currency not to be subject to inflation or price manipulation. The new currency is decentralized and depends only on the laws of supply and demand. All Bitcoin transactions are essentially anonymous and saved in an open-source ledger called The Blockchain. Typically, no fee is associated with Bitcoin, and businesses can accept payments without the need of a merchant account. Also, bitcoins are heavily secured by cryptography, and eliminate the need for a third party intermediary. Furthermore, they are divisible into sub-units, are intangible, and can be accessed on any device with Internet connection. However, the currency has a bad reputation for facilitating illicit activities, falls victim to heavy price volatility, and raises security questions, much like Craigslist. The anonymity has also been found to be poor in a recent FBI case. Clearly, Bitcoin is not yet ready for everyday usage. As more and more businesses accept the currency, however, it may become more stable and hence practical over time.

Abstracts

Student: Bradshaw, Michelle

Major: Mathematics

Faculty Mentor: Susan Serrano

Presentation Type: Oral

Presentation Time: 12:45 PM

Room: CH 108

Title: Queuing Theory: An Application of Probability

Abstract: According to a 2012 New York Times article, Americans spend around 43 billion hours waiting in line each year ("Why Waiting Is Torture"). This amounts to the average American waiting in line for 137 hours in a year. The study of these lines is known as queuing theory, which is an application of probability theory. A variety of probability distributions are used in this branch of operations research, with Poisson and exponential distributions being the most common. Complex models predict wait times for various aspects of a queue, from the expected total wait time of a system to the interarrival time of customers. Queuing theory has a vast array of applications that stretch far beyond waiting in line at the grocery store or bank. Research in this field gives us insight into a system's operations and inner workings to increase perceived customer value by improving efficiency and increasing customer satisfaction, which in turn allows the company to optimize profits. There is also considerable research on the psychology of queuing, which also aids businesses to improve customer satisfaction. Applications discussed include various facets of healthcare, libraries, Disney's FASTPASS system, and airlines.

Student: Bramley, Steven

Major: Political Science

Co-presenters: Jonathan Klos

Co-authors: Jonathan Klos, Ryan Sullivan

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 2:30 PM

Room: CH 108

Title: The Origin of the Hispanic Vote: Identifying a Crucial Voting Group

Abstract: One of the main questions entering a political race is which demographic should a party focus on. This plays an important role in the presidential races. Parties have begun to focus heavily on the Hispanic vote during the elections. Our question is how much of an impact has the Hispanic vote had in the 2000, 2004, 2008 and 2012 elections. For the past three election cycles, Latinos have increased in the electorate (Lopez and Taylor, 2012). Hispanics are getting out to the polls to vote and are increasingly become more prominent in elections, especially for the Democratic Party. Our belief is that the Latino vote is becoming essential for a candidate to win in elections. We plan to look at several different states in the South, their populations, and how Hispanics have voted in these elections. Two states in particular in the South have large Hispanic populations, and those are Texas and Florida, #2 and #3 in Hispanic population in the country (Pew Research, 2013). From looking at the population we will see how Hispanics in different backgrounds voted as well (nationality, income).

Abstracts

Student: Brandon, Spencer

Major(s): Mathematics, Philosophy

Faculty Mentor: Drew Dalton

Presentation Type: Oral

Presentation Time: 1:45 PM

Room: CH 207

Title: The Hegel Bagel

Abstract: Last semester for the Special Topics in Philosophy course we focused on a small but incredibly influential school of philosophy known as German Idealism. The thinkers in this school were interacting with the writings of Kant; the first was Fichte, followed by his students Hegel and Schelling. I did my further research on the logic of Hegel's dialectic, the thesis-antithesis process by which he conducted his philosophy.

Student: Brown, Nicholas

Major: Biology

Faculty Mentor: Mick Lynch

Presentation Type: Oral

Presentation Time: 4:45 PM

Room: CH 206

Title: A policy-based proposal to healthcare and social reform in Niger

Abstract: This interdisciplinary research proposes a top-down approach to healthcare and social reform in Niger. Niger has consistently suffered from high rates of morbidity and mortality, most apparent in children under 5 but afflicting the adult population as well. Poor nutrition, lack of access to acceptable water sources, and extreme poverty have culminated in widespread cases of diarrheal diseases, nutritional deficiencies and malaria. We propose a country-specific intervention that seeks to alleviate the effects of poverty and malnutrition. The proposal looks to improve the water situation using high-efficiency portable filtering bottles that fit the nomadic lifestyle of the majority of Niger's population. Irrigation systems and water-capture systems are proposed to help improve the efficiency of farming to increase the food supply. Community-based farming cooperatives can be organised to increase the agrarian population's access to bank loans and farming equipment which will increase the resilience of the poorest population sector. These proposals are evaluated based on their short-term community-effects, their sustainability, and their cost-effectiveness.

Abstracts

Student: Burgess, Nicole

Major: Psychology

Co-authors: Sharla Dyess, Chelsea Lord

Faculty Mentor: Patrick Smith

Presentation Type: Poster

Presentation Time: 2:45 to 3:45 PM

Room: CH Lobby

Title: Your Brain on Graphic Novels II: Enhancing Dynamic Neuroscience Concepts

Abstract: The field of Neuroscience is a branch of psychology that integrates the biological mechanisms of the nervous system into the study of human behavior (Crisp & Muir, 2012). Most neuroscience textbooks often focus on static illustrations, which demonstrate “snapshots” of nervous system processes. Although there have been ancillary materials that enable students to view more dynamic mechanisms, such as neuron development and communication, students often struggle with this material and may veer away from embracing principles that are becoming more important in psychology. The use of graphic novel analysis has been shown to facilitate better learning of dynamic storytelling in literature (Dallacqua, 2012), and it is hypothesized that linking images to tell the “story of neuroscience” may engage students effectively. The current study explored the construction of a new pedagogical tool that illustrates dynamic mechanisms of neuroscience and how such a resource can enhance student performance. Results showed that students who received the graphic novel not only showed higher comprehension of the material, but they also reported the supplement as a more engaging and creative outlet that they would use in the future.

Student: Burnes, Benjamin

Major: Criminology

Co-presenters: Mike Sancho, Willie Oulette, Alex Carpenter

Co-authors: Mike Sancho, Willie Oulette, Alex Carpenter

Faculty Mentor: Cindy Hardin

Presentation Type: Poster

Presentation Time: 2:45 to 3:45 PM

Room: CH Lobby

Title: Conservation of the Bluefin Tuna

Abstract: Our research project was developed for our business law class to demonstrate the industry of Bluefin Tuna fishing. We will be presenting how these fish have become a big industry and why they must be protected. Included in our presentation will be the threats to the tuna population, the laws regarding this fishery and proper practices to ensure this resource is available to us in the future.

Abstracts

Student: Ceplenski, Callahan **Major:** Business Administration
Co-presenters: Stephen Finocchiaro, David Romanello, Chris Kyser
Co-authors: Stephen Finocchiaro, David Romanello, Chris Kyser
Faculty Mentor: Cindy Hardin
Presentation Type: Poster **Presentation Time:** 1:30 – 2:30 PM **Room:** CH Lobby

Title: Sustainability of Illegal Drugs

Abstract: Our group discussed the Sustainability of Illegal Drugs in the United States. Our group viewed the problem in an economic and environmental standpoint. We weighted in cost, distribution of the products, and the effects it will have on the population as a whole.

Student: Cowan-Reynolds, Brittany **Major(s):** Music- Music Management
Co-presenters: Clinton Sorrel, Dane Sorensen, Aurora Celeste
Co-authors: Clinton Sorrel, Dane Sorensen, Aurora Celeste
Faculty Mentor: Cindy Hardin
Presentation Type: Poster **Presentation Time:** 1:30 – 2:30 PM **Room:** CH Lobby

Title: Putting a Stop To Hazing

Abstract: Putting a Stop To Hazing was done to show the effects on environmental sustainability in the college environment and what possible solutions could be done to put a stop to hazing.

Student: Cota-Robles, Christina **Major:** Political Science
Co-authors: Wesley Davis, Melissa Buckley
Faculty Mentor: Bruce Anderson
Presentation Type: Oral **Presentation Time:** 4:00 PM **Room:** CH 208

Title: The Unhealthy South

Abstract: This paper evaluates the hypothesis that health is asymmetrically distributed by region and that the South is less healthy than the non-South. The claim was measured by looking at rates of death from avoidable lifestyle-related diseases including: heart disease, diabetes, stroke, kidney disease, and hypertension.

Student: Cota-Robles, Christina **Major:** Political Science
Faculty Mentor: Bruce Anderson
Presentation Type: Oral **Presentation Time:** 1:45 PM **Room:** CH 208

Title: Childhood Obesity Policy

Abstract: Childhood obesity is a policy problem in the United States due to the increased risks of future health problems and healthcare costs. The research for this project was based on Bardach's eightfold path for policy analysis. Multiple policy suggestions are introduced and evaluated including school, community and advertisement policy based on optimal default measures.

Abstracts

Student: Cota-Robles, Christina

Major: Political Science

Faculty Mentor: Keith Huneycutt

Presentation Type: Oral

Presentation Time: 2:15 PM

Room: CH 206

Title: Every Man Must Have A Code

Abstract: This is my narrative journey through heaven and hell that highlights the importance of having a moral code and being aware of the personal impact of one's actions. The short story was inspired from the works of C.S. Lewis and George MacDonald.

Student: Dangelo, Nikole

Major: Business Administration

Co-presenters: Haley Knight, Anushka van Huyssteen, Chloe Carpenter

Co-authors: Haley Knight, Anushka van Huyssteen, Chloe Carpenter

Faculty Mentor: Cindy Hardin

Presentation Type: Poster

Presentation Time: 2:45 – 3:45 PM

Room: CH Lobby

Title: Clothing Conservation

Abstract: The clothing and textile industry is prominent all across the world, as well as within the borders of the United States. This vast industry is a necessity by people world-wide and will continue to grow at an increasing rate due to the large population increases. Consequently, clothing and textile manufacturers create a large amount of pollution through their production processes and unsafe work environments that are harmful to the environment, as well as the employees who are subject to them. Environmental sustainability is not only important to present generations, but also for the generations to come. Our research project focuses on environmental sustainability and its relation to the law. OSHA, the Pollution Prevention Act, and the Resource Conservation and Recovery Act all promote clean production processes in the manufacturing industry. These three laws have been enacted in order to decrease the amount of pollution that is created by clothing and textile manufacturers, adaptations in production processes that are required, and to ensure a safe and healthy work environment for all employees. In addition to our research and comprehension of the laws regulating the industry, we have designed a unique solution that will allow for further enhancement and magnification of these laws through clothing conservation.

Student: D'Angona, Jason

Major: Political Science

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 1:30 PM

Room: CH 207

Title: Guns

Abstract: According to the media shootings have become a major issue in the United States. Which in turn has caused some Americans to ask for stricter gun laws throughout the United States. The four alternatives are ways to help the American people chose the best option to help control the problems that they are facing.

Abstracts

Student: Dyer, Chelsea

Major(s): Psychology, Criminology

Faculty Mentor: Lisa Carter

Presentation Type: Oral

Presentation Time: 3:15 PM

Room: CH 206

Title: Women in Crisis: Mental and Physical Issues in the Criminal Justice System

Abstract: The individuals currently involved in the criminal justice system face a significant dilemma in terms of mental and physical illness and efforts of aid, especially when compared to the general population. Specifically, female inmates are plagued by certain obstacles which become magnified when experienced within the confines of a prison or jail. Investigating the numerous physical and mental ailments these women face, including pregnancy, post-partum depression, and gynecological concerns, this essay intends to shed light on the inadequacies and procedures currently taken by health care and criminal justice professionals. Due to the fact that the majority of the population of inmates have emerged from impoverished communities, there are often pertinent underlying behavioral and physical health concerns even before the time of incarceration. Further, the overcriminalization trend and prison and jail overcrowding seen in America leads to not only a greater likelihood of the spread of disease, but also exacerbates the deficiency of treatment and services. I intend to recognize any measures currently being taken to rectify these alarming concerns and propose additional necessary solutions.

Student: Francis, Olivia

Major: Business Administration

Co-presenters: Morgan Hammett, Ryan Hill, Abby Boone, Keith Sneed

Co-authors: Morgan Hammett, Ryan Hill, Abby Boone, Keith Sneed

Faculty Mentor: Cindy Hardin

Presentation Type: Poster

Presentation Time: 2:45 – 3:45 PM

Room: CH Lobby

Title: Targeted Internet Advertising

Abstract: The purpose of this project was to show what targeted internet advertising is, along with the pros and cons of it. Followed by whether or not targeted internet advertising is actually a good thing to have or if it is unnecessary and annoying.

Student: Geras, Matthew

Major: Political Science

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 12:45 PM

Room: CH 109

Title: Low Voter Turnout in the United States

Abstract: Using Bardach's Eightfold Path to More Effective Problem Solving, I will be analyzing the issue of low voter turnout in the United States. Additionally, I will be reviewing the effectiveness of possible policy alternatives and their impact on turnout.

Abstracts

Student: Geras, Matthew

Major: Political Science

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 1:00 PM

Room: CH 109

Title: The Effects of the 17th Amendment on Voter Responsiveness

Abstract: In 1913, the 17th Amendment became law, which established direct election of senators in all 50 states across the country. Prior to 1913, most states elected their senators through the state legislature, but a few states including Oregon already elected their senators directly. I will be determining the effects of the 17th Amendment on voter turnout across the county by examining elections results from 1878 through 1948 and will also be investigating whether the 17th Amendment had a greater impact on the south or non-south.

Student: Goodwin, Jared

Major: Biology

Faculty Mentor(s): Emily Bradshaw; Brittany Gasper

Presentation Type: Oral

Presentation Time: 2:00 PM

Room: CH 207

Title: Investigation of Bisphenol A Effects on PPAR-gamma Gene Expression in *Xenopus laevis* Tissue

Abstract: The African clawed frog, *Xenopus laevis*, is an inexpensive model organism that is often used to test how chemicals may affect humans. Bisphenol A, commonly referred to as BPA, is a synthetic plastic substance classified as a diphenylmethane derivative and bisphenol. The prevalence of BPA is astounding. A 2003-2004 report by the Center for Disease Control (CDC) found that 93% of all urine samples tested contained levels of BPA and it is now possible to be exposed to BPA through the air, dust, and water. Previous research suggested that an increase in BPA exposure resulted in an increase in body and liver masses. The objective of this research was to test the effects of in vivo BPA exposure on *Xenopus laevis* expression of the PPAR- γ gene. Ultimately, the hypothesis of this investigation is that BPA's potential role as an obesogen and the potential to act as a ligand for PPAR- γ should result in an increased expression of PPAR-gamma when BPA concentrations are increased.

Abstracts

Student: Gomez, Kimberly

Major: Psychology

Co-authors: Mary Wood

Faculty Mentor: Leilani Goodmon-Riley

Presentation Type: Poster

Presentation Time: 12::30 – 1:30 PM

Room: CH Lobby

Title: The Effects of Self-Awareness and Self-Esteem on Facial Assortative Mating

Abstract: The purpose of this study was to determine if there is a relationship between self-esteem, self-consciousness, and rates of assortative mating. According to assortative mating theory, individuals are attracted to romantic partners that resemble themselves even at the individual facial feature level. Based on these findings, we hypothesized that the observed sample would exhibit “assortative mating,” as measured by a high percentage of facial feature overlap between the participant’s face and an “attractive” face they created. However, others have shown that assortative mating tendencies depend on a variety of factors, including self-esteem. We also hypothesized a positive relationship between self-esteem and rates of “assortative mating” (i.e., lower self-esteem individuals would be less likely to “assortatively mate”). In addition to self-esteem, there is also some evidence that self-consciousness levels might be related to assortative mating. For example, social comparisons, which involve self-awareness and appraisal, can reduce self-esteem in lower self-esteem individuals (White, Landger, Yariv, & Welch, 2006). These results on social comparisons and self-awareness, led to the current hypothesis that participants who are made highly self-aware would exhibit an even greater positive relationship between self-esteem and assortative mating compared to those who are not made self-aware.

Student: Griffiths, Lauren

Major: Environmental Studies

Faculty Mentor: Eric Kjellmark

Presentation Type: Oral

Presentation Time: 4:45 PM

Room: CH 208

Title: Medicinal Extraction of Vinblastine and Vincristine from Madagascar Periwinkle (*Catharanthus roseus*)

Abstract: Vinblastine and Vincristine are drugs used to treat cancer. These compounds traditionally come from the ornamental flower, Madagascar periwinkle (*Catharanthus roseus*). Since these alkaloids have been previously extracted, there are documented methods on how to obtain these chemicals. The powdered plant is percolated with methanol and extracted with sulfuric acid and ethyl acetate. The pH is adjusted and the solution is once again extracted and evaporated. Once the solid is extracted, various tests are performed to determine whether Vinblastine and Vincristine were obtained. Dragendorff’s reagent and a test strip are used to make sure that an alkaloid is present. Infrared spectroscopy (IR) and nuclear magnetic resonance (NMR) spectroscopy results are used to determine the exact arrangement of the compound which is compared to the known arrangements of Vinblastine and Vincristine.

Abstracts

Student: Griffiths, Lauren

Major: Environmental Studies

Faculty Mentor: Eric Kjellmark

Presentation Type: Oral

Presentation Time: 4:15 PM

Room: CH 206

Title: Seasonal Seagrass Colonization Proximal to Restoration Projects

Abstract: Seagrasses are often overlooked in estuarine habitats because mangroves or rock formations are more obvious to the public. Yet, seagrasses help to maintain populations of fishes and invertebrates, stabilize the sediments, and improve water quality. When restoring marine sites, seafloors are often brought up to elevations that support seagrass colonization. Using a meter quadrat, restoration sites were examined throughout the year, noting seagrass species and percent cover. The goal of this research project was twofold: (1) to determine the percent cover and biodiversity of seagrasses at managed sites based on the year since the project was restored; and (2) to determine how seagrass colonization is dependent on seasonality. Seagrass surveys were performed within the Lake Worth Lagoon in Palm Beach County, Florida. After performing the surveys, it became evident that seagrasses are affected by temperature and seasonal differences. The data also shows that it takes approximately 4.5 years for seagrasses to cover about fifty percent of the seafloor. By monitoring and stabilizing seagrasses for almost five years after restoration, project managers can help seagrass colonization's permanence even throughout cyclical changes.

Student: Gryncewicz, Grace

Major: Biology

Co-presenters: Megan Creavy

Co-authors: Megan Creavy

Faculty Mentor: Cindy Hardin

Presentation Type: Poster

Presentation Time: 1:30 – 2:30 PM

Room: CH Lobby

Title: Mitigation Banking

Abstract: Mitigation Banking is the preservation, improvement, renewal or creation of a wetlands, streams or habitat conservation areas to balance or compensate for expected negative impact of nearby similar ecosystems. The value of the bank is defined as "compensatory mitigation credits". The US Army Corps of Engineers along with other state and federal agencies approves the number of credits available to be sold by the bank sponsor. There are hundreds, if not thousands, of wetland mitigation banks currently operated across the United States. Conservation banks are now being used to help restore other kinds of natural habitat areas and there are over 100 banks across the US protecting over 130 species and habitat types. Their growing popularity reflects the fact that mitigation banking is more cost effective as a means of restoring natural resources, can reduce delays in permitting, eliminates the temporary loss of natural resources during development and assures maintenance of these vital natural areas forever.

Abstracts

Student: Hammett, Morgan

Major: Business Administration

Faculty Mentor: Cindy Hardin

Presentation Type: Poster

Presentation Time: 1:30 – 2:30 PM

Room: CH Lobby

Title: Targeted Internet Advertising

Abstract: Personalized web advertising is a type of internet advertising that attempts to connect consumers with advertisements that might interest the consumer based on each user's personal internet history. Utilizing everything from the purchase history of consumers to demographic, psychographic, and firmographic variables, targeted advertising companies such as The Traffic Stream, Tacoda, and Claria make more money through their personalized advertising campaigns. An IP (Internet Protocol) address links a user to the internet. In many cases, users have static IP addresses, meaning they always use the same set of numbers when they send information over the internet. The use of an IP address is, in essence, a user giving up their privacy as an exchange for the ability to use the internet. People use the internet knowing that their information will be stored and viewed by others; Web advertising is just an example of how this information is used by others. Going on multiple sites with one IP address allows servers to track and identify you based on your history. HTTP cookies are a way of storing data in a Web user's computer, keeping records of any past visits to a website or form so that a user's future visits to a site are "easier" and so that a user can remain logged in while on a site. The Web Privacy Census was done by Berkley University in 2012 as a study to see how many websites use cookies as a means of Web tracking. The Census found that almost every Web site uses cookies—both first and third party cookies—to track user data.

Abstracts

Student: Huang, Leo

Major(s): Chemistry

Faculty Mentor: An-Phong Le

Presentation Type: Poster

Presentation Time: 2:45 – 3:45 PM

Room: CH Lobby

Title: Paper-Based Microfluidics For Detection of Nitrite In Water

Abstract: Nitrate is extensively used in agricultural fertilizers, but it is easily transported into surface waters, such as lakes and rivers, by rainfall and irrigation. Human ingestion of nitrate is harmful because nitrate can be reduced to nitrite by digestive bacteria, leading to decreases in the ability of blood to carry oxygen. Test strips are commercially available to measure the concentrations of nitrate and nitrite in water, but these test strips are only semi-quantitative, providing rough estimates of concentrations with limited precision. We will present our work to date to integrate a colorimetric test for nitrite onto paper-based microfluidic devices designed to provide more precise quantitative measurements. (Implementation of nitrate sensing on these devices will be incorporated in future work.) Reagents for the Griess test for nitrite (sulfanilamide, 1-naphthol, and tartaric acid) are patterned onto channels printed onto chromatography paper using a wax printer, and the formation of an orange-red diazo dye will be measured in a thermometer-style assay where the amount of nitrite present is related to the length of the color change along the paperfluidic channel. Devices such as these can be designed to minimize their cost while making their operation simple enough for non-experts to use, taking advantage of well-established chemistries to measure environmental pollutants of interest.

Student: Jensen, Tye

Major: Biology

Faculty Mentor(s): Emily Bradshaw; Brittany Gasper

Presentation Type: Oral

Presentation Time: 3:30 PM

Room: CH 206

Title: Effects of Raspberry Ketones on Chinese Hamster Ovary Cells and 3T3-L1 Cells

Abstract: Raspberry ketones, the aromatic compound of red raspberries, have recently been linked to fat loss through increased lipolysis, beta oxidation, adiponectin secretion and fat deposition inhibition. To date, the molecular mechanism of raspberry ketone function is not well understood. The cellular effects of raspberry ketones were investigated using Chinese Hamster Ovary (CHO) cells and 3T3-L1 adipocytes. Concentration and time course studies showed no observable morphological changes with up to 100 μ M raspberry ketones compared to DMSO control. Cell count and viability tests showed that 100 μ M raspberry ketones suppressed CHO cell division compared to a DMSO control, but cell viability tests indicated no change in trypan blue exclusion compared to the DMSO control. PPAR γ is a nuclear receptor that is associated with adipogenesis. In order to determine if raspberry ketones modulate PPAR γ expression in 3T3-L1 cells, RNA from raspberry ketone and DMSO treated cells was extracted. RT-PCR will be performed and we will use gene specific primers to determine if raspberry ketones changes PPAR γ levels.

Abstracts

Student: Kaiser, Hunter

Major: Political Science

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 1:30 PM

Room: CH 208

Title: Juvenile Recidivism

Abstract: The American juvenile justice system is failing and is in desperate need of reform. An appalling rate of approximately 55% of all juveniles released from incarceration are rearrested within one year. In some urban areas and cities, recidivism rates can reach up to as high as 76%. High recidivism indicates the current system in place is failing to provide meaningful rehabilitation to offenders reentering the community, and therefore should be amended in efforts to reduce the number of juvenile criminals returning to the system. This paper presents a model that rates recidivist on a scale based on the type of crime committed and type of punishment/program they received. The paper proposes three solutions to help better solve this public problem, and proposes one final solution determined to be the best possible solution.

Student: Krystek, Jessica

Major: Psychology

Co-presenters: Carlie Gray

Co-authors: Calley Simpson, Samantha Butterfield

Faculty Mentor(s): Leilani Goodman-Riley; Deah Quinlivan

Presentation Type: Poster

Presentation Time: 2:45 – 3:45 PM

Room: CH Lobby

Title: Mitigating the Effects of Cheating Behaviors in Collegiate Students

Abstract: A study was conducted to examine the effects of incentive and academic honesty statements on college students' cheating behavior. Many factors contribute to cheating, and educators have attempted to mitigate these behaviors by including an academic honesty statement in the syllabus. However, the academic honesty statement might not be efficacious in the presence of a strong incentive to cheat. For example, a student who is struggling with an exam that determines whether that student passes the class has a greater incentive to cheat than one who is not failing the class. It was hypothesized that the incentive would increase cheating behaviors regardless of the academic honesty statement. Participants were led to believe that the test they were taking was a simple test to study memory and recall. During the course of their test, the researcher was taken out of the room for a false emergency. Before leaving, however, the participants were given a false debriefing form containing the answers and were told not to open it until the researcher's return. A confederate then mentioned that the answers were attached to the debriefing form and claimed to use them on her test. A handful of the test questions were difficult and were associated with false answers. Examining whether the participant used the false answers was used to determine whether or not a student had cheated.

Abstracts

Student: Kyser, Chris

Major: Psychology

Co-authors: Larry Mitchell, Maryann Buckland, Leilani Goodmon

Faculty Mentor: Leilani Goodmon-Riley

Presentation Type: Poster

Presentation Time: 12:30 – 1:30 PM

Room: CH Lobby

Title: Web-based Interviewing: Question Type Preference and Response Quality

Abstract: Businesses are embracing web-based interviewing as a way to improve employment selection (e.g., Hodgson & Harbottle, 2008). Web-based interview systems such as EASyView™ (by Employment Technologies Corporation) may be well-suited for college campus recruiting because recruiters can use EASyView™ to prescreen a larger number of applicants for later face-to-face interviews on campus. In addition, students, who are usually younger and more comfortable with technology, tend to react more favorably to technology-based recruiting methods (Chapman, Uggerslev, & Webster, 2003). However, typical EASyView™ interviews are composed of structured, behavioral questions, that inquire about past work experiences. Past behavioral questions are extremely effective with applicants who have a solid work history (McDaniel, Schmidt, & Hunter, 1988), however they may not be as effective with college students, who have limited work experience. Therefore the purpose of this study was to examine how students react to two types of questions administered through EASyView™: (1) past, experiential questions and (2) hypothetical, future oriented questions. Inconsistent with the hypothesis, participants actually preferred and gave better responses to the past behavioral questions. The results imply that past behavior interview questions can be used effectively for both college students and those with a solid work history.

Abstracts

Student: Kyser, Michael

Major: Psychology

Co-presenters: Jillian Chamberlain, Fernando Loret de Mola

Co-authors: Jillian Chamberlain, Fernando Loret de Mola

Faculty Mentor(s): Kerry Newness; Deah Quinlivan

Presentation Type: Poster

Presentation Time: 12:30 – 1:30 PM

Room: CH Lobby

Title: The Effectiveness of Transactional and Transformational Leadership Styles in Dyadic Relationships

Abstract: The purpose of the current research study was to compare the effectiveness of transformational and transactional leadership styles on task performance in dyadic relationships. Transformational leaders value the development of their followers by providing idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation (Bass, 1985). These leaders inspire followers by communicating a clear vision, valuing their followers on a personal level, encouraging moral and ethical behaviors, and instilling a sense of prosocial value (Bono & Judge, 2004; Grant, 2012). While transformational leaders are known for being charismatic visionaries, they may also alter the structure of jobs to help facilitate follower performance (Bono & Judge, 2004; Piccolo, Greenbaum, Den Hartog, & Folger, 2010). Transactional leaders, tend to focus attention on clarifying tasks so their followers can optimize their efforts (Bass, 1985; Burns, 1979). The three dimensions of transactional leadership include contingent reward, management by exception active, and management by exception passive (Judge & Piccolo, 2004). Contingent reward requires the leader to provide followers with clear expectations and goals coupled with anticipated rewards for meeting those expectations. Both types of management by exception involve the leader responding to organizational problem or issues as they arise (Howell & Avolio, 1993).

Student: LaMar, Jaime

Major: Mathematics

Faculty Mentor: Jennifer King

Presentation Type: Oral

Presentation Time: 4:30 PM

Room: CH 206

Title: MocSpace Collaboratory

Abstract: Engaged Teaching and Learning is an approach to teaching and learning in which students are responsible for active participation in the learning process and teachers encourage meaningful inquiry, critical thinking, and problem-solving. The MocSpaces Collaboratory was formed to establish a collaborative group of students and faculty through the use of focus groups to discuss the existing learning spaces at FSC (referred to as MocSpaces). The focus groups evaluated the space; reviewed pictures of innovative spaces from peer and aspirant campuses; and made suggestions for renovation and redesign.

Abstracts

Student: Mader, Holly

Major: Biology

Faculty Mentor: Melanie Langford

Presentation Type: Oral

Presentation Time: 2:00 PM

Room: CH 206

Title: Analysis of the Microbial Flora in the Digestive Tract of the Florida Manatee (*Trichechus manatus ssp. latirostris*)

Abstract: One of the most well known and endangered animals in Florida, *Trichechus manatus ssp. latirostris*, otherwise known as the Florida Manatee, relies on warm coastal waters and an herbivorous diet to survive. Although much effort has been put into conservation and protection of the Florida Manatee, surprisingly little is known about the microbial flora of manatees and the effect that microbes have on their health. Through collaboration with the Marine Mammal Pathobiology Lab in Saint Petersburg, Florida, stomach tissue samples and fecal samples from Florida Manatees were collected. DNA extraction and PCR amplification were performed on the samples as the first step in identifying the bacterial colonizers that reside in their gastrointestinal tract.

Student: Mays, Carolyn

Major(s): Computer Science, Mathematics

Co-presenters: Jordan Finney, Peter Funcheon, Peter Oddo

Co-authors: Jordan Finney, Peter Funcheon, Peter Oddo

Faculty Mentor: David Mathias

Presentation Type: Poster

Presentation Time: 2:45 – 3:45 PM

Room: CH Lobby

Title: Agile Development of Mobile Mocs 2014

Abstract: Getting lost on campus is no fun – students, faculty and staff, as well as visitors are always 'on the move' at Florida Southern and have some place they need/want to be! There is no longer a need to search for a campus map kiosk if you have a smartphone in hand because 'there's an app for that!' Using a combination of development tools including Oracle's JDeveloper, Oracle's ADF Mobile, Agafonkin's Leaflet API, and Web 2.0 technologies as well as a combination of programming and scripting languages such as Java, JavaScript, PHP, HTML, and AJAX, this 4-student software engineering team took an agile approach to design, develop and implement a mobile solution that is deployable to smartphones running iOS and Android. MobileMocs is an app that offers the user a GPS-enabled interactive campus map, a calendar of events, as well as a link to the FSC Mobile Portal.

Abstracts

Student: Middleditch, Ashlea

Major: Psychology

Co-presenters: Ashleagh Desrosiers, Siobhan Buckley

Co-authors: Ashleagh Desrosiers, Siobhan Buckley, Stephanie Thacker

Faculty Mentor: Leilani Goodmon- Riley

Presentation Type: Poster

Presentation Time: 1:30 – 2:30 PM

Room: CH Lobby

Title: Attributional Style and Directed Forgetting of Valenced Information

Abstract: We explored the relationship between ways of thinking (optimistic/pessimistic) and directed forgetting of positive, negative, and neutral information in order to determine if pessimists differ in their ability to change mental contexts in order to forget interfering information. Based on previous research on the relationship between depression, pessimism, rumination, and directed forgetting (e.g., Cottencin, Gruat, Thomas, Devos, Goudemand, & Consoli, 2008; Leahy, 2004), it was hypothesized that pessimists would exhibit a forgetting deficit for negative words and enhanced forgetting of neutral. The hypothesis was supported. Both pessimists and optimists exhibited a forgetting deficit for negative information. However, compared to optimists, pessimists exhibited greater forgetting of neutral words (17% vs. 2%). Sahakyan, Delaney, and Goodmon (2008) suggest that successful forgetting is the result of a change in mental context (e.g., thinking of something else) and Lehman and Malmberg (2011) attributed the enhanced forgetting of neutral information in depressed individuals to their greater ability to change mental contexts between the forget list and remember list (perhaps via rumination). The results imply that pessimists might also be able to more readily change mental contexts (via negative “ruminative” thoughts) resulting in greater forgetting of neutral words and more anti-forgetting of negative words.

Abstracts

Student: Miller, Amanda

Major: Psychology

Co-authors: Trissa Dodson

Faculty Mentor(s): Leilani Goodmon-Riley; Patrick L. Smith

Presentation Type: Poster

Presentation Time: 2:45 – 3:45 PM

Room: CH Lobby

Title: Children's Preference and Recognition of Different Landscape Photographs

Abstract: In recent research, college students found photographs of natural landscapes more aesthetically pleasing than urban environments or photographs by an artist named Edward Burtynsky, who combines natural with urban elements in his artwork (Hester, Goodmon, & Smith, 2012). The purpose of the current study was to discover if this preference for natural landscapes generalizes to a sample of preschoolers. Additionally, because researchers have shown that children as young as three can remember photos (Daehler & Bukatko, 1977), we also wanted to determine if aesthetic preferences were related to photo memory. Preschoolers were shown photos of natural, urban, and Burtynsky landscapes and were asked to give a preference rating. They were then given a recognition memory test. Consistent with the hypothesis, the preschoolers preferred the natural landscapes to the Burtynsky photos and this preference difference increased with age. There was only a significant memory advantage for natural landscapes in one experiment; however there was a positive correlation between likability ratings and recognition for natural landscapes in both experiments. The results indicate that young children have already developed aesthetic preferences for natural landscapes. Given the link between context and memory, these results imply that preschool environments may benefit from natural landscape scenes.

Student: Miller, Brian

Major: Business Administration

Co-presenters: Fernando Loret De Mola, Marissa Braden, Katie Mckenna

Co-authors: Fernando Loret De Mola, Marissa Braden, Katie Mckenna

Faculty Mentor: Cindy Hardin

Presentation Type: Poster

Presentation Time: 1:30 – 2:30 PM

Room: CH Lobby

Title: GMO? OMG!

Abstract: Knowing where food comes from and how it's made can determine whether it is healthy or unhealthy for humans. There are three different types of food. Nonorganic or normal foods are normally processed and grown on a farm. Genetically Modified Foods have been injected by foreign genes, which are genes from other plants or animals. Organic Foods are crops grown without the use of pesticides. Genetically modified organisms are not considered organic and are not used to produce organic crops. (USDA) The purpose of this project is to analyze the legal issues of the three types of foods and determine which of the three is the most beneficial to a person's health.

Abstracts

Student: Miller, Cory

Major: Psychology

Co-presenters: Amber Bilchik

Co-authors: Amber Bilchik

Faculty Mentor(s): Patrick Smith; Mary Pharr

Presentation Type: Oral

Presentation Time: 4:15 PM

Room: CH 207

Title: A Case Study of Ender's Game: Think of the Children!

Abstract: Ender's Game features a military academy charged with the responsibility of defending Earth from alien invasion. Their recruits are genius children and their objective is the ruthless transformation of these children into galactic soldiers who will bear the survival of mankind on their young shoulders. Rife with the mechanisms of behaviorism, social dynamics, and acculturation, Ender's Game illustrates the power of environmental circumstances to modify human behavior. By extension, the film can be interpreted as an allegorical reference for the shaping of students' personalities, moral development, and social behavior by educational institutions.

Student: Mitchell, Larry

Major: Psychology

Co-authors: Chris Kyser, MaryAnn Bucklan, Leilani Goodmon- Riley

Faculty Mentor: Leilani Goodmon-Riley

Presentation Type: Poster

Presentation Time: 12:30 – 1:30 PM

Room: CH Lobby

Title: Employment Selection Method Preferences: Computer-based Simulation or a Personality Test

Abstract: Companies are constantly striving to find and recruit the best candidates available. Out of all of the different techniques a company may use in their attempts to find the best potential employee, the interviewing process may be the most important. It not only allows the company to learn about the potential employee but it also allows the company to make provide a good impression on the candidates, which is equally important to many companies. Even with the importance of this step in the recruiting process being evident, many companies continue to use traditional face to face interviews or personality tests when selecting candidates. Recent research has even suggested that these traditional techniques may not be as effective or appealing to candidates as other forms, such as computer simulation tests. The current study provided an alternative screening process to the traditional interview process in the form of a computer-simulated test developed by Employment Technologies Corporation (ETC) attempting to develop data regarding candidate preference.

Abstracts

Student: Myrberg, Ashley

Major: Biology

Faculty Mentor: Emily Bradshaw

Presentation Type: Oral

Presentation Time: 4:00 PM

Room: CH 206

Title: The Effects of Eugenol on PPAR γ expression in 3T3-L1 cells

Abstract: Tulsi and cinnamon are plants with many beneficial qualities including anti-diabetic properties and lipid reduction. Several chemicals common to both have been identified that contribute to these beneficial qualities. Eugenol, a chemical found in both plants, may have benefits on lipid homeostasis. We tested the hypothesis that Eugenol modulates PPAR- γ , a nuclear protein involved in adipogenesis. To determine working concentrations of Eugenol, concentration and time course experiments were performed in Chinese Hamster Ovary cells and in 3T3-L1 cells. Cell count and trypan blue exclusion tests demonstrated that 1 μ M, 50 μ M, and 500 μ M concentrations of Eugenol did not show changes in cell number or viability compared to the ethanol control. To determine if Eugenol modulates PPAR γ , RNA was isolated from Eugenol and control treated 3T3-L1 adipocytes, was treated with reverse-transcriptase, and amplified by PCR using PPAR γ and actin specific primers. Preliminary data suggests that Eugenol increases PPAR γ RNA.

Student: Nash, Lauren

Major: Elementary Education

Faculty Mentor: Lori Rakes

Presentation Type: Oral

Presentation Time: 3:00 PM

Room: CH 206

Title: Minimizing the Elementary Reading Gender Gap: Implementation of Strategies in a School for Children with Dyslexia

Abstract: Research has shown that a gender gap exists in the areas of reading motivation and achievement in the elementary grades. Boys are consistently outperformed by their female counterparts in everyday classroom activities as well as on standardized tests. Incorporating activities that allow boys to be physically engaged with a text and choosing books with male protagonists are two methods that have been shown to effectively lessen the gap in the general education classroom. In order to determine if these strategies also work in a school specifically for children with dyslexia, a study was performed at The Roberts Academy, a school for children with dyslexia associated with Florida Southern College. Fourth graders read the book Holes by Louis Sachar over four weeks and completed weekly quizzes and discussions. Two of the four classes also played a game called Bookventure weekly that tested their knowledge of the book and allowed them to complete physical challenges related to the text. Pre and post interviews of students and teachers as well as observations showed an increase in reading motivation.

Abstracts

Student: O'Keefe, Shawn

Major: Biology

Faculty Mentor: Emily Bradshaw

Presentation Type: Oral

Presentation Time: 1:15 PM

Room: CH 206

Title: Part I: Investigation of the Effects of Taurine and Caffeine Supplementation on PPAR-gamma Expression in 3T3-L1 Cells

Abstract: The effects which caffeine and taurine have on Chinese Hamster Ovary (CHO) and 3T3-L1 cells were observed. Prior to investigating the direct effects caffeine and taurine have on 3T3 cells, it had to be established that these compounds do not harm the cells in order for conclusions to be drawn. This was to be accomplished using a time course and concentration curve as well as a cell count and viability study. CHO cells were used as they are much easier to culture and conclusions drawn from them can be applied to 3T3 cells.

The time course and concentration curve show that no morphological changes took place in concentrations of caffeine up to 1 mM and of taurine up to 100 mM as compared to an incomplete media control. Also when combinations of caffeine up to 1 mM and taurine up to 10mM are used there are again no morphological changes compared to the control. The cell count and viability study show that these compounds do not cause an increase or decrease in the number of cells or in the viability of them. Based off of these results it can be concluded that these compounds will be safe to use in the future as their effects on PPAR-gamma expression in 3T3 cells is studied.

Student: O'Keefe, Shawn

Major: Biology

Faculty Mentor: Emily Bradshaw

Presentation Type: Oral

Presentation Time: 1:30 PM

Room: CH 206

Title: Part II: Investigation of the Effects of Taurine and Caffeine Supplementation on PPAR-gamma Expression in 3T3-L1 Cells

Abstract: Taurine and caffeine have been shown to regulate lipid metabolism in previous research experiments. Still unknown however is the manner of how these compounds do this. A possibility is that they act through inhibition of the PPAR-gamma gene. Previous work in this study has shown that concentrations of caffeine up to 1 mM and taurine up to 100 mM are safe treatments to use for testing with 3T3-L1 cells. This is known from data collected during a time course and concentrations curve that showed no morphological changes in Chinese Hamster Ovary cells treated with these concentrations as compared to control cells. A cell count and viability study was also conducted which showed that these treatments do not kill more or less cells as compared to a control. Based off of these results it can be concluded that these compounds can be used in the future as their effects on PPAR-gamma expression in 3T3 cells are studied. The next steps for this research are to observe the effects which taurine and caffeine have on PPAR-gamma expression which will be done through extraction and RT-PCR of RNA from 3T3-L1 cells.

Abstracts

Student: Oldfield, Nicole

Major: Biology

Faculty Mentor: Nancy Morvillo

Presentation Type: Oral

Presentation Time: 4:30 PM

Room: CH 207

Title: A Review of Celiac Disease and the Potential Relationship to an Altered Intestinal Microbiome

Abstract: Celiac disease is an autoimmune disorder in which a patient's small intestine is damaged in response to gluten. Currently, the only treatment for celiac disease is a gluten free diet. This disease is genetic, though there are many other factors that are associated with its diagnosis. A review of existing literature found that there may be an association between the presence of Celiac disease in an individual and an alteration in the intestinal microbiome of that individual. It has been found that in individuals diagnosed with Celiac disease, the levels of E. coli were increased, while the levels of Bifidobacteria decreased. This information raised the question as to whether or not the change in the abundance of certain bacterial species within the intestine of a Celiac patient could be attributed to the gluten free diet.

Student: Parvin, Dylan

Major: Political Science

Faculty Mentor(s): Kelly McHugh; Bruce Anderson

Presentation Type: Oral

Presentation Time: 2:15 PM

Room: CH 208

Title: Collective Bargaining In Education

Abstract: In regard to the Education system the Teacher's unions negotiate for the teachers they represent and the employer is the government (Legislators and Governors.) The issue that arises with this is that the Teachers continuously ask for salaries/pay that the government considers to be too much, the government fails to return with a counter offer based on lack of resources, and then teachers continue to be paid too little . In order to fix this the collective bargaining system must be altered, removed, or replaced. In doing this the result would hopefully be well compensated teachers and a satisfied government. An example would be Wisconsin in 2011 when Gov. Scott Walker proposed a state budget that crippled the public sector and collective bargaining across the state; the teachers union was up in arms in response. Governor Walker's legislation allowed school board power to adjust work assignments and conditions without the say of the teachers. The government was not satisfied so they altered the system, the teachers however continued to be under compensated.

Abstracts

Student: Payne, Carter

Major: Political Science

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 4:00 PM

Room: CH 207

Title: Deforestation and Poverty in the Brazilian Amazon

Abstract: In this essay, I examine the problems of deforestation and poverty in Brazil's Amazon rainforest. This essay follows Bardach's Eightfold Path of policy analysis. I will explain the history of deforestation in the region, and the policies of the Brazilian government which have caused fluctuations in forest loss. I will discuss poverty in the region, and reveal where it is most widespread. I will discuss the reasons that the rainforest should be left intact, such as the abundance of medicinal plants in the forest, and the forest's ability to absorb carbon dioxide. I will offer potential solutions to the problems of deforestation and poverty. I will project the outcomes of these solutions, discuss their trade-offs, and decide which solutions would be the most effective.

Student: Perez, Alyssa

Major(s): Art- Studio, Art Psychology

Co-authors: Chelsea Dyer, Sharla Dyess

Faculty Mentor(s): Patrick Smith; Leilani Goodmon-Riley

Presentation Type: Poster

Presentation Time: 12:30 – 1:30 PM

Room: CH Lobby

Title: Your Brain on Graphic Novels I

Abstract: As education continues to grow, researchers and professors are always seeking out new ways to enhance student learning. For difficult subjects like neuroanatomy, it is especially challenging for students to comprehend and engage in the material. One method that has seen results is the addition of visual imagery combined with text. We created a "graphic novel," images and text on the subject of brain anatomy. We hypothesized that students who were given the graphic novel as additional study material would perform better on a test over the material as well as enjoy the material more than students who were presented with only text. The results were consistent with our hypothesis.

Abstracts

Student: Ramirez, Kira

Major: Political Science

Co-authors: Caitlin Simmons

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 12:30 PM

Room: CH 109

Title: Desegregation Busing: A Case Study of Four Cities

Abstract: The main question of this paper is to determine how successful desegregation of school districts has been in the United States in the years since *Brown v. Board*. We will seek to explore if desegregation has remained in select school districts. We will specifically focus on several districts that have been released from court ordered desegregation plans (from the North and South) and compare statistics from before and after release from court orders. In addition to these districts, we will also look at recent cases that have been brought before the Department of Justice concerning segregation disputes as well analyze the effects of policies such as open enrollment on re-segregation. In all cases, the demographics of the regions we investigate will be analyzed.

Student: Randolph, Kayle

Major: Human Movement and Performance

Faculty Mentor(s): Mick Lynch; Michael McElveen

Presentation Type: Oral

Presentation Time: 2:45:PM

Room: CH 206

Title: Relationship of Exercise and Depression

Abstract: In recent years, researchers have begun seeing a potential link between physical activity and the absence of depression. Very few studies have been done on college age students, so this study aimed to identify any potential relationship between physical activity and depression on the Florida Southern College campus. Students were given a depression screening and a physical activity questionnaire, and the resulting data was analyzed for possible correlations.

Abstracts

Student: Royer, Amanda

Major: Psychology

Co-presenters: Raven Leverett, Gracia Hilliard

Co-authors: Raven Leverett, Gracias Hilliard, Leilani Goodmon-Riley, Tracey Tedder, Lori Rakes, Sonja Skaggs, Shari Richard

Faculty Mentor: Leilani Goodmon-Riley

Presentation Type: Oral

Presentation Time: 1:00 PM

Room: CH 108

Title: The Effect of Using Exercise Balls in Place of Classroom Chairs on the Behavior and Reading Comprehension of Children with Dyslexia

Abstract: Research lends support that children benefit in the classroom from using exercise balls in place of chairs. For example, Schilling and colleagues (2003) examined ADHD children when they were using exercise balls in place of chairs and found an increase in “in-seat” behavior and learning while using exercise balls. (Schilling, Washington, Billingsley, & Deitz, 2003). In another study, Horgen (2009) measured the frequency of off-task behavior by recording the number of times the teacher had to redirect the class and found that the teachers felt less inclined to redirect their students back to the task at hand when they were seated on the exercise balls. Although, there has been an extensive amount of research on children with ADHD and exercise balls, there has not been any research done on children with dyslexia and the use of exercise balls in the classroom. We employed a repeated measures, wait-list control factorial with treatment condition (use of exercise balls, use of regular chairs) as the within subjects factor and measures of classroom behavior and reading comprehension as the dependent measures. This study measured reading comprehension and behavior when the children are on the exercise balls compared to when they are in normal classroom chairs.

Student: Simmons, Caitlin

Major: Political Science

Faculty Mentor: Bruce Anderson

Presentation Type: Oral

Presentation Time: 2:00 PM

Room: CH 108

Title: Over Prescription of Pharmaceutical Drugs: A Policy Problem

Abstract: Using Bardach’s model for policy analysis, I argue that current policies surrounding pharmaceutical drugs have led to over prescription in the United States. Over prescription has created several problems that should be addressed, such as rising healthcare costs and adverse reactions. In this paper, I specifically identify why over prescription is a problem and provide supporting data. I continue by proposing three policy alternatives for consideration that focus on a variety of issues, such as additional training of medical staff and changing advertising tactics used by pharmaceutical companies. For each of these alternatives, I analyze areas such as political viability and cost effectiveness. Moreover, I provide a cost-benefit analysis of each alternative, including potential trade-offs, and use these findings to determine the most viable option for altering current pharmaceutical policies. To conclude, I will provide a final argument as to which policy alternative I feel most comprehensively addresses over prescribed drugs.

Abstracts

Student: Stromberg, Kate

Major: Mathematics

Faculty Mentor: Susan Serrano

Presentation Type: Oral

Presentation Time: 2:00 PM

Room: CH 208

Title: Simple Linear Regression with an Application in Biological Research

Abstract: This research project explores the theory and analysis behind simple linear regression and applies it to a real world example. The goal behind regression analysis is to determine the relationship between two variables so one can predict the value of one based on the other. By going through the steps to determine this relationship, we can apply it to an experimental data set. In the experiment, researchers want to use NLRC2 gene expression to predict the age of a monkey captured in the wild. This research explores the results of the study using simple linear regression with the help of a statistical software package.

Student: Teh, Wei Pin

Major: Chemistry

Faculty Mentor: Ronald Pepino

Presentation Type: Poster

Presentation Time: 12:30 – 1:30 PM

Room: CH Lobby

Title: Enhancing Atomic Transportation Across Off-resonant Optical Lattice

Abstract: In the field of quantum optics, it has been theoretically demonstrated that neutral, ultracold, bosonic atoms are able to move across an energetically flat lattice if there is a chemical potential difference between two reservoirs. However, if there is a significant energy gap between adjacent lattice sites, then the atomic current becomes virtually non-existent. Here, we demonstrate that the lost current can be recovered by modulating the tunnelling barrier at a frequency that corresponds to the gap energy. Such recovery schemes might enable one to control a quantum signal of atomic current. We can then apply this into atomtronics in creating atomic flip flops.

Abstracts

Student: Telcy, Anne

Major: Chemistry

Faculty Mentor: An-Phong Le

Presentation Type: Poster

Presentation Time: 2:45 – 3:45 PM

Room: CH Lobby

Title: Migration and distribution of capsaicinoids in seasoned beef using microwave-assisted high-performance liquid chromatography

Abstract: Peppers are used in cooking worldwide for the flavor and heat that they add to food, but the movement of flavor compounds through food during preparation and cooking is not well understood. In this project, we analyzed the distribution of two different capsaicinoids (capsaicin and dihydrocapsaicin) as these compounds are principally responsible for the heat imparted by peppers on food. Ground pepper samples were applied to beef steaks, and the distribution of capsaicinoids along the cross-section of the steak was measured using high performance liquid chromatography. A microwave-assisted extraction procedure followed by solid phase extraction were utilized to improve the recovery of capsaicinoids from the seasoned beef samples. Improved understanding of how these flavor compounds diffuse through food during preparation and cooking can inform preparation methods to control the flavor profile of the finished products.

Student: VanLandingham, Erin

Major: Communication, Advertising and Public Relations

Faculty Mentor: Robert Drake

Presentation Type: Oral

Presentation Time: 4:30 PM

Room: CH 208

Title: Digital Design: The Process of Creating an E-book

Abstract: As the world gradually becomes more dependent on digital media, the use of paper-and-ink documents is decreasing significantly. This is true in schools especially, and Florida Southern College is no exception. This semester, I had the opportunity to lead a group of six students in creating an electronic version of a sports management textbook for future Florida Southern students. While using a variety of techniques in applications like Photoshop and InDesign, we slowly recreated a printed textbook into a dynamic and easy-to-use e-book accessible on an I-Pad, Kindle, or other tablet device. After careful planning and deliberation, we assigned each group member certain aspects of the book to specialize in creating. I supervised the assembly of the book and ensured that its chapters maintained uniformity throughout. The project presented us with many challenges, but the benefits of working as a team allowed us to overcome each problem. Our painstaking efforts yielded efficient and uniform results that satisfied our clients and provided excellent experience in team management and digital design.

Abstracts

Student: Wilson, Kelley

Major: Business Administration

Co-presenters: Eric Kronenwetter, Christina Camp, Eric Lancaster, Marlon Tyson

Co-authors: Eric Kronenwetter, Christina Camp, Eric Lancaster, Marlon Tyson

Faculty Mentor: Cindy Hardin

Presentation Type: Poster **Presentation Time:** 1:30 – 2:30

Room: CH Lobby

Title: GMO Sustainability and the Environment

Abstract: How will the production of GM crops affect the long-term farming yields? Problem: GM engineers claims GM crops protect the soil from erosion, loss of moisture, and would require less insecticide treatments, however studies show this causes the “living component central to nutrient cycling and the health and fertility of the soil to be shut down”. Hypothesis: If GM seeds shut down the natural function of the soil, then the long-term yields of GMO crops will fail due to sterile soil. Conclusion: It is believed that GMO seed will disrupt that natural process of soil ecology. Diversity in soil ecology is required for soil fertility, however, the gene transfer between GMO seed and soil bacteria create a loss in diversity. Diversity is necessary for the natural process in the natural growth of a plant. Therefore, GMO seed will cause the soil to be less fertile.

Student: Yanichko, Christopher

Major: Biochemistry and Molecular Biology

Faculty Mentor(s): Emily Bradshaw; Brittany Gasper

Presentation Type: Oral **Presentation Time:** 12:45 PM

Room: CH 206

Title: Effects of Atrazine of *Xenopus laevis*

Abstract: Runoff of atrazine, the most widely used herbicide in the United States, can negatively affect local ecosystems. Many studies have examined the effects of atrazine, an endocrine system disruptor, on liver morphology, histology, and function. However, few studies have examined the impact on other tissues, including the heart. This research project analyzed the effects of atrazine in vivo on the African Clawed Frog *Xenopus laevis*. Three groups of tadpoles were exposed to ecologically relevant doses of atrazine and compared to a control group not exposed to the chemical. Ultimately, mean heart tissue mass increased with increasing atrazine concentration, suggesting that atrazine may induce cardiomegaly. Liver tissue was also examined for proteins involved in fat storage mechanisms. Future experiments will be based off this research that examine gene expression of genes important in heart and liver development after exposure to atrazine.

Abstracts

Student: Zines, Jeffrey

Major: History

Faculty Mentor(s): Nick Steneck; Mike Denham

Presentation Type: Oral

Presentation Time: 2:15 PM

Room: CH 108

Title: Defending Dixie: Congressman James A. Haley and the Civil Rights Movement

Abstract: This presentation focuses on Congressman James A. Haley, who represented the Lakeland area in the U.S. House from 1953-1977, and his views concerning the Civil Rights movement of the 1950s and 1960s. The bulk of my research was conducted in the McKay Archives, which holds in its collection Haley's official papers from his time in the Congress. I explore the different views of Civil Rights that were prevalent in the American South, and whether Congressman Haley aligned with the segregationists or moderates.

