FLORIDA MEMORIAL UNIVERSITY

A PROMISE. A FUTURE.

FIFTEENTH ANNUAL RESEARCH EXPERIENTIAL LEARNING AND PERFORMING ARTS DAY

April 13th 2018

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FIFTEENTH ANNUAL

RESEARCH EXPERIENTIAL LEARNING and PERFORMING ARTS DAY

Order of Events

April 13, 2018

9:00 AM to 11:00 AM

Concurrent Sessions

FMU/FIU BLDG Rooms 115, 150, & 165

11.30 am to 1.00 pm

Radio Commercials presentations

Visual and Performing Arts Presentation

Impromptu Speeches

Smith Conference Center

Health and Natural Sciences

Oral Presentations:

1. **Name:** Malayjia Parrish
   Mentor: Dr. Rose Stiffin
   Title of Project/Presentation: *Determining the Presence of Heavy Metals and Radiation Levels within the Sediment and on the Surface Water of Florida Memorial University's Urban Pond*

Abstract

This report is a study of the presence of heavy metals such as lead, chromium and copper and radiation levels in surface water and in the sediment. In most urban ponds, the different layers of sediment absorb most concentrations of heavy metals rather than on surface water. Throughout this period of study, 300 mL of surface water and sediment was collected in individual 600 mL beakers and further tested for background radiation, counting statistics with Vernier, chromium and copper test kits, and Maestro software. The water was collected using the Water Sampler by the Science Source and the sediment was collected by the Combination Sampling and Measurement Outfit instrument by LaMotte. High levels of radiation and heavy metals can cause illness, harm or even death which affects the human and animal life around the urban pond area.

2. **Name:** Ahmed Calvo
   Mentors: Dr. Rose Mary Stiffin; Dr. Marilyn Sherman
   Title of Project/Presentation: *The Antifungal Effect of Acetyl Salicylic Acid (Aspirin) and N-(4-hydroxyphenyl) Acetamide (Acetaminophen) on Sexual and Asexual Reproducing Saccharomyces cerevisiae.*

Abstract

Several types of drugs have been used to test for antifungal as well as antibacterial effects. Research shows how drugs, which were not known to be effective in treating fungal diseases, have been able to reduce infection of a variety of fungus. The purpose of this experiment was to test Acetaminophen and Acetylsalicylic acid, two known analgesics, as antifungal drugs. The yeast Saccharomyces cerevisiae was the organism used for the study because it allowed the experimenter to not only see the antifungal effect of the drugs in use but also how does this differ in sexual and asexual reproduction. The results were consistent with the expectation of the experimenter where the increase of the drug concentration also increased the inhibition of the yeast growth. The experimenters also saw a difference in the sexual types with the yeast reproducing sexually were more sensitive with the treatment compared to the asexual reproducing groups. Acetylsalicylic acid showed a far better result as antifungal compared to the other analgesic in test giving the conclusion that it could be used as antifungal in minimal yeast infection.

3. **Name:** Le'Quoyal Graham
Mentors: Dr. Rose Mary Stiffin; Dr. Marilyn Sherman
Title of Project/Presentation: *Determining Levels of Naturally Occurring Radiation in Phosphate Fertilized Nicotiana tabacum (Tobacco) Plants*

Abstract

Naturally occurring radioactivity refers to the radioisotopes normally found in materials all around us from building materials, to food, and other products. Isotopes of Uranium, Thorium, and Potassium are the isotopes usually present. Tobacco farmers use phosphate fertilizers to increase their product yield, in which these phosphate fertilizers contain radioactivity through the emission of Radon to Radium in the Uranium decay series. Home grown tobacco plants containing phosphate fertilizer are tested in comparison to tobacco plants grown without fertilizer for radiation counts as well as the type of radionuclide present in the tobacco plant samples compared to background. As expected, this level of radioactivity is low in the tobacco plant samples with fertilizer, yet higher than background as well as plants grown without fertilizer which will still constitute a health hazard for smokers in addition to a biochemical one.

4. **Name:** Neugenia Joseph
Mentors: Dr. Rose Mary Stiffin; Dr. Marilyn Sherman
Title of Project/Presentation: *The Antimicrobial Effects of Various Benzoin Condensation Products on Escherichia coli, Bacillus cereus and Micrococcus luteus*

Abstract

Benzoin (2-hydroxy-1, 2- diphenylethanone) is an alpha- hydroxyketone and serves as a template for many medicines and natural products. It is used to treat various bacterial infections, including croup, canker sores, and laryngitis. Using the Green Organic Benzoin condensation protocol, benzoin- like compounds; 4, 1-Dimethylaminobenzaldedhyde and 4, 1-Piperidinylbenzaldehyde were synthesized. These products were then used to treat Escherichia coli, Bacillus cereus and Micrococcus luteus. The data from the Carbon 13 and Proton Nuclear Magnetic Resonance Spectroscopy of the benzoin analogs are examined alongside their effect on bacterial growth.

Posters

1. **Names:** Linedia Masson1, Stacy-Ann J. Parker, Kevin Tidgewell
   Mentor: Dr. Stiffin
   Title of Project/Presentation: *Discovery of Norepinephrine Transporter Ligands from Marine Cyanobacteria for Neurological Disorders*

Abstract

Marine cyanobacteria produce bioactive natural products with activities ranging from cytotoxic to neuromodulatory. Despite the wide array of biologically active marine cyanobacterial secondary metabolites, their use as a source for CNS modulatory activity is understudied. This provided the opportunity to explore marine cyanobacterial extracts for lead compounds targeting receptors and monoamine transporters (MATs) located in the CNS. Approximately 225 cyanobacterial fractions were screened, using a radioligand competition-binding assay, for their ability to bind to receptors and MATs. Fraction 2064E, collected in Panama, demonstrated selectivity for the norepinephrine transporter (NET: Ki = 279 nM) and will be further investigated. Compounds that selectively inhibits NET terminate the uptake of norepinephrine. Increase in synaptic concentration results in psychostimulant, appetite suppressant, and antidepressant effects which could potentially treat neurological disorders. Efforts to isolate and characterize compounds from this NET active fraction will be discussed.

2. **Name:** Jelonia Rumph
   Mentor: Dr. Marilyn Sherman
   Title of Project/Presentation: *Does Oxidative Stress Effect Susceptibility to Bacillus anthracis surrogates?*

Abstract

Background: Anthrax is an infection caused by Bacillus anthracis. The clinical forms include: cutaneous, ingestion, injection and inhalation. There have been 24 documented cases of inhalation anthrax in the United States since the mid-20th century. 15 of 24 patients died; 10 of 15 fatalities but only one of nine survivors had an underlying chronic disease associated with oxidative stress. During inhalation anthrax, alveolar macrophages (AM) coordinate the immune responses. However, recent studies have shown that AM phagocytic index (PI), an indicator of microbe clearance, is decreased when they are exposed to oxidative stress.
Aims/Hypothesis: We investigated whether oxidative stress impairs the PI of alveolar macrophages for a Bacillus anthracis surrogate- Bacillus cereus. We hypothesized: ethanol-exposed AM will have a significantly decreased PI compared to control AM. Treatment of ethanol-exposed AM with arginine improves PI.
Methods/Results: Using alcohol abuse as a model of oxidant stress, MH-S cell lines were cultured for 3 days in MH-S media, MH-S media/ethanol, MH-S media/arginine, or MH-S media/ethanol/arginine. Samples were exposed to Bacillus cereus spores and the PI was calculated and statistically analyzed. There was a significant difference between the MH-S media and the MH-S media/ethanol group. The P value calculated from the difference between these groups was 0.036.
Conclusion: Oxidative stress decreases the PI of AM, and could possibly increase susceptibility to Bacillus cereus and Bacillus anthracis. Arginine treatment provides a supply of precursors for antioxidant synthesis and improves the PI of oxidatively stressed AM.

Oral Presentations:

1. **Names:** Michael Williams, Roody Romain, Schneider Pierre
   Mentor: Dr. Robert Steinhoff
   Title of Project/Presentation: *BambooBreaker Game*

Abstract

A cell phone app called "BambooBreaker" game is developed using the Swift programming language in the Xcode development environment. This is a tennis type game using a ball and paddle customized to the FMU environment. The presentation summarizes the project experiences developing this app along with future needed modifications.

2. **Names:** Alexis Damianos, Shonte Deveaux, Jonnell Emmanuel, Wesley Jeffers
   Mentor: Dr. Robert Steinhoff
   Title of Project/Presentation: *FMU Event App*

Abstract

An Android cell phone app called "FMU Event App" is created using the Java programming language to allow students and faculty to input events, their location, time, flyer or a picture. The code used to develop this app is described along with the template and modifications made to customize it to our application. The things that we learned in building this app on mobile software application development and maintenance are summarized in this presentation.

3. **Names:** Shantel Johnson, Oliver Williams, Reynaul Conno
   Mentor: Dr. Robert Steinhoff
   Title of Project/Presentation: *4096 Educational Math Game*

Abstract

A new cell phone app called "4096 Game" is developed using the JavaScript programming language to create an educational math game for students. The project describes the steps taken to develop this app along with the problems encountered, how we solved them working as a team, and the lessons learned. Although the app is not perfect we learned a lot and had a lot of fun in the process.

4. **Names:** Jamique Campbell, Deonte Rahming, Kervin Joanel
   Mentor: Dr. Robert Steinhoff
   Title of Project/Presentation: *Stay Up Inspirational App*

Abstract

A new cell phone app called "Stay Up" is developed using the Java programming language to provide daily philosophical inspiration and encouragement. The stages leading to the development of the app are fully described along with the subsequent coding and testing. Obstacles and work arounds are discussed as well as future modifications needed.

Oral Presentations:

1. **Name:** Vashti Charlton
   Mentor: Capt. A Tolbert
   Title of Project/Presentation: *Growing Aerospace Trends*

Abstract

Over the years, there have been major technological advances in the woodworks regarding flying or the operating of aircrafts which will soon be coming to fruition. These include new fighter jets, flying cars, jet packs and rockets to name a few. The technological advancements that this world is taking on are breathtaking and their anticipated arrival create much excitement. A few examples include craft to craft communication, flying commuters, data handling, and how a message gets from the cockpit to the landing gear, rudder, or anyplace else. Passenger jets and automatons are by all account not the only vehicles that should communicate with one another in the not so distant future. We must examine the steps it takes to enjoy such luxuries, the different sectors that they may hinder, the journey to stardom, and the impact on the country's defense, security, and safety.

2. **Name:** Joshua Williams
   Mentor: Capt. A. J. Tolbert
   Title of Project/Presentation: *TCAS and the Story behind It*

Abstract

We will delve into the fascinating realm of Aviation Safety. The Traffic Alert and Collision Avoidance System or TCAS is a perfect example of years of technological evolution to bring about the highest levels of Aviation Safety. Many aspects about TCAS will be covered, such as; who initiated the research and development, when did testing of the system begin, how does the system work, and how does it make the skies safer. Mountains of value and knowledge will be shared to inform others about the TCAS and aviation safety in general.

Psychology

Oral Presentations:

1. **Name**: Amanda Diggs
   Mentor: Dr. Edward Stephenson
   Title of Project/Presentation: *The Social Psychological Factors That Influence Academic Achievement of students at Historically Black Colleges or Universities.*

Abstract

The purpose of the present study is to examine the factors that influence academic achievement among students who attend a Historically Black College or University. This study uses a non-experimental, correlational design in which surveys were used as the basis of data collection. First, it is expected that the more students participate in special programs, the higher their grade point average (GPA) will be. Secondly, students who live on campus will have a higher GPA compared to students who live off campus. Third, the more satisfied students are with their living arrangements, the higher their GPA will be. Lastly, the higher the level of students' academic self-concept, the higher their GPA will be.

2. **Name:** Janee Butler
   Mentor: Dr. Edward Stephenson
   Title of Project/Presentation: *The Influence of Exercise and Eating Habits on Body Satisfaction*

Abstract

The purpose of the present investigation is to examine the psychological effects of exercise and eating habits on the body satisfaction of African American college students. The research methodology used was a non-experimental correlational design in which data was collected through the use of surveys. Participants included 95 students attending a Historically Black College and University. It was hypothesized that the more frequently students exercise, the more satisfied they would be with their bodies. It was also hypothesized that the healthier the eating habits of students, the more satisfied they would be with their bodies.

3. **Name:** Tacara Simmons
   Mentor: Professor Stephenson
   Title of Project/Presentation: *Gender Differences in Personality across the Big Five among African American College Students*

Abstract

The purpose of the present study is to examine the differences in personalities across the Big Five personality traits among African American college students. The study uses a non-experimental research design in which surveys were used as the basis of data collection. The sample consisted of 75 students of which 81.8% were female, 13.6% were male, and 4.5% were transgender. It is expected that females will score higher on the factor scales of Extraversion, Agreeableness, and Neuroticism compared to males. It is also expected that males will score higher on the factors of Openness and Conscientiousness compared to females.

4. **Name**: Alice Manu
   Mentor: Dr. Stephenson
   Title of Project/Presentation: *The Influence of Exercise on the Academic and Psychological Well-Being of Students at an HBCU*

Abstract

The purpose of this study is to examine the influence that exercise has on the academic and psychological well-being of African American college students. This research uses a non-experimental design, in which surveys were distributed to 100 students. It is expected that the more frequently students exercise, the more satisfied they will feel about life. Moreover, it is expected that frequency of exercise will be related to students' experience of depression, whereby the more they exercise, the less depressed they will be. Finally, it is expected that the more students exercise, the less stress they will experience, thus the better they will do academically.

Social Work

Oral Presentation:

1. **Name:** Doranny Aquino

Mentor: Dr. Boynton
Title of Project/Presentation: *College Students' Attitudes on Children's Exposure to Domestic Violence*

Abstract

This study examined the attitudes of college students towards the prevalence effects of child exposure to domestic violence in a sample of 19 to 25 year-olds at Florida Memorial University. Studies investigating the impact of child exposure to domestic violence at home is restricted by a range of methodological issues. Nevertheless, adequate proof from these studies exists that concludes that such exposure has adverse effects. Childhood exposure to abusive behavior at home can be related with increased display of aggressive behavior, expanded emotional problems (such as depression, anxiety, lower levels of social competence), and poorer academic functioning. The main hypothesis statement in this study is: "A child's mental and emotional health development is affected negatively when exposed to domestic violence."

Social Sciences

Oral Presentations:

1. **Name:** Cierra Jones
   Mentor: Dr. Torulagha
   Title of Project/Presentation: *HBCU Students' Perceptions towards Police Brutality*

Abstract

The purpose of the present investigation is to determine the attitudes and perceptions that African American college students have towards the police and to determine if their perceptions are related to police encounters.

2. **Name:** Breana McBride and Monica Jones
   Mentor: Dr. Hudson
   Department: Social Sciences
   Title of Project/Presentation: *Adverse Childhood Experiences Profile of FMU Students*

Abstract

A significant number of FMU students come from homes and communities where their exposure to violence has been greater than the average for young adults. New findings suggest that these experiences impact these individuals in important ways including learning difficulties, a proclivity towards risky behaviors, and Post Traumatic Stress symptomology.

Radio Commercials — Smith Conference Center

Mentor: Dr. Bill Jong-Ebot

Names: Janesha Allen
Doranny Aquino,
Destiny Spencer
Darryl Stevens
Student Life

Names: Javonte Bromell
Ashley Butler
Victoria Jones
Keionye McNeal
Basketball Shoes

Names: Aissatou Balde
Abigail Evans
Jose Demosthene
24-hour Moisture Lip Care

Names: Ernest Carswell
JP Collins
Damari Cutler
Pablo Delgado
Cheating

Performing Arts Presentation Smith Conference Center

PLAY Team

Mentor: Ms. Nicole Yarling

Rashad Armbrister

Edwin “Bare” Derico

Andres Deza

Darryn Ferguson

Markisha Grant

Raymond Anthony Guerrero

William Hobbs

Lascell Laver

Walet Maciel

Micaela Ortiz

Lucette M. Romelus

Albert De Los Santos

Schanel Silvest

Danica Soius

Chy’enne Williams

Acknowledgements

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Ms.Yvonne Bendross

Committee Members

Dr. Denise Callwood-Brathwaite (ex officio)

Dr. Annamaria Jerome-Raja (Chair)

Dr. Arnold Tolbert

Mr. Mel White

Dr. Rose Mary Stiffin

Dr. Edward Stephenson

Dr. William Jong-Ebot

Dr. Nathaniel Holmes

Dr. Yvonne Campbell

Ms. Nicole Yarling

Dr. Micheal Elliott