Interdisciplinary Research Conference

Focus on Your Future

Palm Beach Atlantic University

2016 – 2017

March 29-30, 2017

Presented by: Accreditation, Assessment and Research
Co-Sponsor: Alumni Relations
The Interdisciplinary Research Conference was developed to recognize the scholarship of students and faculty in all disciplines. It provides our undergraduate and graduate students and faculty with the opportunity to present their scholarly work to the campus community. In this context, research is interpreted as any scholarly or creative activity ranging from scientific experimentation to artistic expressions, service-learning, literary criticism, or case-study designs.

The conference was designed to facilitate the exchange of ideas among all fields of inquiry, encourage scholarly investigation, and foster the educational function of research, broadly defined.

The theme, *Focus on Your Future*, was incorporated to provide students with an opportunity to use their scholarly work as leverage in exploring future career possibilities.

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### Conference Opening Session

**Wednesday, March 29, 2017**

**Lassiter Rotunda – Warren Library**

11 a.m. to Noon

**Welcome and Opening Prayer**

**Dr. Gene C. Fant, Jr.**

*Provost and Chief Academic Officer*

**Introduction of the Keynote Speaker**

**Dr. Matthew J. DellaVecchia**

*Associate Professor of Pharmaceutical Sciences*

*Lloyd L. Gregory School of Pharmacy*

**Keynote Speaker**

**Dr. Jacob R. Richards ‘10**

*Regulatory Scientist*

*Food and Drug Administration*

Refreshments will be served on the Yeager Patio immediately following the opening session.

*A complimentary copy of Enlightening Minds: Research Review 2016 is available at the conference registration table.*
Dr. Jacob R. Richards ‘10

Food and Drug Administration

Cancer Immunotherapy: Using Your Own Body to Fight Your Cancer

Jacob R. Richards, Ph.D., is a regulatory scientist at the Food and Drug Administration (FDA) in the Office of In Vitro Diagnostics and Radiological Health in the Center for Devices and Radiological Health. In this position, Richards is responsible for the reviewing, consulting and approving of molecular and immune cancer diagnostics for use in the United States.

Before joining the FDA, Richards was a Cancer Research Training Award Fellow in the Laboratory of Tumor Immunology and Biology at the National Cancer Institute in the National Institutes of Health. In this role, he was primarily responsible for the development and identification of novel biomarkers that could predict treatment benefit in cancer patients treated with immunotherapy. Before his Ph.D. training at the University of Florida, Richards worked in academic administration at PBA, assisting and supervising the peer tutoring program.

During his scientific career, Richards has published 17 peer-reviewed scientific publications, presented six scientific talks at international meetings and published 16 scientific abstracts. He is the author of “Predicting the Efficacy of Cancer Immunotherapy” published in The Scientist magazine in 2015.

Richards earned a Bachelor of Science with honors in medicinal and biological chemistry from Palm Beach Atlantic University in 2010. He and his wife, Anastasha, live in Silver Spring, Maryland.
Student and Faculty Poster Presentations

Lassiter Rotunda – Warren Library
Wednesday, March 29, 2017  Noon – 1 p.m.

Alaina Bell and Joshua Rowe, Biology majors; and Dr. Angela D. Witmer, Assistant Professor of Biology and Oceanography, School of Arts and Sciences. “Anthropogenic Movement of Benthic Macrofauna by a Sediment Transfer Station.” (p. 11)

Nikkira Brown, Exercise Science major, School of Education and Behavioral Studies. “The Effects of Sprint Interval Training on Anaerobic Threshold in Collegiate Women Basketball Athletes.” (p. 11)

Sean Campbell and Brian Lowe, Exercise Science majors, School of Education and Behavioral Studies. “Effect of Altitude Simulation Training at Sea Level on Aerobic Capacity and Pulmonary Function.” (p. 10)


Dan Farrokh, Exercise Science ‘16; Dr. Matthew J. Mitchell, Associate Professor of Health and Human Performance, School of Education and Behavioral Studies; and Dr. Jim Mitroka, Associate Professor of Pharmaceutical Sciences, Lloyd L. Gregory School of Pharmacy. “Exercise and Depression: Role of Brain-Derived Neurotrophic Factor (BDNF) Genotype.” (p. 10)

Dr. Anne Harring, Assistant Professor of Pharmacy Practice; Dr. Jamie Fairclough, Assistant Professor of Administration and Social Sciences; Dr. Dana Brown, Associate Professor of Pharmacy Practice; and Aisha Shokoya, Pharmacy major, Lloyd L. Gregory School of Pharmacy. “Assessing First-Year Pharmacy Student and Faculty Perceptions of Objective Structured Clinical Examinations.” (p. 8)

Kayla Knight, Exercise Science major, School of Education and Behavioral Studies. “Reduced Blood Lactate Concentrations Following ‘Healthy’ Pre-Exercise Meal Ingestion in Collegiate Softball Players.” (p. 11)

Dr. Matthew J. Mitchell, Associate Professor of Health and Human Performance; and Grace Patterson, Mikaeli Hassell, Nikki Brown, Exercise Science majors, School of Education and Behavioral Studies. “Varied Lateral Reaction Times in Collegiate Women Athletes: Role of Bilateral Visual Reaction Time.” (p. 11)

Dr. Matthew J. Mitchell, Associate Professor of Health and Human Performance; and Denise Brietkreuz, Assistant Professor of Health and Human Performance; Cody DeBoer, Human Performance and Sport ‘16; Jaimie Gasch, Jessica Harris, Emily Nickell, Grace Patterson, and Tanner Young, Exercise Science majors; and Sara Orbe, Human Performance and Sport major; School of Education and Behavioral Studies. “Health and Fitness Related Indicators of Disease in PBA Students: A Three-Year Investigation.” (p. 12)

Joe Nunez, Human Performance and Sport major, School of Education and Behavioral Studies. “Role of Stride Length on Baseball Velocity in Experienced Pitchers.” (p. 12)

Grace Patterson, Exercise Science major, School of Education and Behavioral Studies. “Anemia Indicators in Collegiate Women Athletes and Effect on Performance.” (p. 12)

Dr. Peggy VanArman, Professor of Biology; Kyle Holly, Biology ‘16, Trinity Livingston, Zoology ‘16, Austin Peighel, Biology major; David Periard, Marine Biology major; Catherine Wiersma, Biology ’16; and Joel VanArman, “Fifteen Year Follow-up Survey to Assess the Progress of a Cypress-Pond Apple Tree Planting Project in the ARM Loxahatchee National Wildlife Refuge, Boynton Beach, Florida.” (p. 7)

Shelby Wood, Emily Sierra, and Bertnie Jeanniton, Psychology majors; and Dr. Chandrima Bhattacharya, Assistant Professor of Psychology, School of Education and Behavioral Studies. “Social Correlates of Personality and Decision Behavior in Abuse Survivors.” (p. 12)
Conference Schedule
Student and Faculty Presentations
1 - 4:30 p.m.

Wednesday, March 29

1 p.m.

2 p.m.
Kevin Boyle, Master of Divinity major. “Paul and Jewish Christian Law Keeping.” (p. 6)

2:30 p.m.
Ericka Squire, Adjunct Instructor of Dance. “Dance: A Trading Zone and Conduit for Interdisciplinary Collaboration.” (p. 6)

3:30 p.m.
Jenna Wolfram, Public Relations major, School of Communication and Media. “The Normalizing of Relations between the United States and Cuba with a Concentration on the Trade Embargo.” (p. 6)

4 p.m.

3 p.m.
Keaton Grant, Pharmacy major. “Assessment of Supplemental Infectious Diseases Instruction through Social Media.” (p. 7)

3:30 p.m.
Aisha Shokoya, Pharmacy major. “Assessing First-Year Pharmacy Student and Faculty Perceptions of Objective Structured Clinical Examinations.” (p. 8)

4 p.m.
Conference Schedule

Student and Faculty Presentations
1 - 4:30 p.m.

Thursday, March 30

Liberal Arts and the Social Science Track
Lassiter Rotunda

1 p.m.

1:30 p.m.
Dr. Marina Hofman, Adjunct Instructor of Biblical Studies.
“Trauma in Genesis 16.” (p. 8)

2 p.m.
Dr. Jeremy Couch, Executive Director for Orlando Campus.
“Optimizing Organizational Health: Understanding the Key Behavioral Indicators that Contribute to a Healthy and Thriving Work Culture.” (p. 8)

2:30 p.m.
Rita Rivera, Psychology major. “An Ongoing Threat to Latin American Women.” (p. 9)

3 p.m.
Dr. Olga Deitlin, Associate Professor of Counseling; Jeremy Loomis, Counselor Education major, School of Education and Behavioral Studies. “Authenticity in Online Education: A Quest for Best Practice.” (p. 9)

4 p.m.
Jessica Koreis, Sean Goodman, Kristy St. Louis, Maddie Dunning, Psychology majors; “The Effects of Childhood Trauma on Anxiety in Young Adults.” (p. 9)

Science and Health Care Track
Warren Library (Room 208)

1 p.m.
Nicole Freire, Biology major. “Tracking and Evaluating the Global and Biological Threats to the Human Race.” (p. 9)

1:30 p.m.
Professor Linda Casale, Adjunct Instructor of Nursing.
“Mental Health Promotion and Prevention Program for Higher Education Students.” (p. 9)

2 p.m.
Mike Chen, Professor of Business Statistics.
“Changes in Risk Preferences over Repeated Description-Based Decisions.” (p. 10)

2:30 p.m.
Sean Campbell and Brian Lowe, Exercise Science majors, “Effect of Altitude Simulation Training at Sea Level on Aerobic Capacity and Pulmonary Function.” (p. 10)

3 p.m.
Jessica Harris, Exercise Science. “Mechanisms Underlying Exercise Included Reductions in Cancer-Related Fatigue.” (p. 10)

3:30 p.m.
Dan Farrokh, Exercise Science ’16. “Exercise and Depression: Role of Brain-Derived Neurotrophic Factor (BDNF) Genotype.” (p. 10)
Willa Cather paints a picture of a simple Czech family in Neighbour Rosicky. Marital Roles in transition from boyhood to manhood.

What may be taken as plain: the importance of fatherhood in the sophisticated title of tragedy, Miller emphasizes the importance of assurance, something he passes on to his son Biff. By claiming the in his trade and as a father. Accordingly, Miller points to Willy's attainment of true masculinity, being primarily the success of a man in a tragic narrative. In his common world, nobility is defined as the attainment of true masculinity, being primarily the success of a man in his trade and as a father. Accordingly, Miller points to Willy's lack of relationship to his father as the reason for his lack of self-assurance, something he passes on to his son Biff. By claiming the sophisticated title of tragedy, Miller emphasizes the importance of what may be taken as plain: the importance of fatherhood in the transition from boyhood to manhood.

Marital Roles in Neighbour Rosicky

Therese Hair, English major, School of Arts and Sciences

Willa Cather paints a picture of a simple Czech family in 20th-century America forging through the typical struggles of farming. While both the story’s protagonist, Anton Rosicky, and his wife, Mary, care deeply for one another and their children, the traditional roles of husband and wife are reversed in Neighbour Rosicky. Rosicky is portrayed as the domestic nurturer in the marriage while Mary fulfills the part of rigid protector. This subtle shift in marital roles is shown throughout the story in the household tasks both husband and wife perform, the familial roles that they fill, and the way that they relate to one another. Upon the conclusion of the story, the careful reader will be left with the impression that Rosicky plays the part of the feminine partner while Mary plays the part of the masculine partner.

Race as Religion in Zora Neale Hurston’s The Gilded Six Bits

Alia Michaud, English major, School of Arts and Sciences

In The Gilded Six-Bits, Zora Neale Hurston depicts a struggle for racial self-acceptance through a journey of spiritual disgrace and absolution, effectively making the argument that the two — racial pride and religious piety — are of equal importance. This paper examines the progression of the characters as they leap from innocence into a fall of Biblical proportions to eventual absolution, supported simultaneously by both religious imagery and racial symbols. The author concludes that Hurston recognizes and argues for the soul-crushing implications of betraying one's pride in one's race for the sake of artifice and conformity, and that she asserts that paradise can only be rediscovered when one learns to live securely in one's own skin.

Oral Presentations

Wednesday 3/29 at 1 p.m. – Group Presentation

Death of a Salesman: A Tragedy for Normal People

Austin Grubbs, Cinema Television major, School of Communication and Media

Arthur Miller’s description of his play, Death of a Salesman, as a “tragedy of the common man” may seem oxymoronic to those familiar with the classical definition of tragedy. Because tragic heroes generally come from a place of nobility, a “common” tragic hero seems impossible. However, Miller redefines what nobility is and how it functions in his common world to produce a tragic narrative. In his common world, nobility is defined as the attainment of true masculinity, being primarily the success of a man in his trade and as a father. Accordingly, Miller points to Willy’s lack of relationship to his father as the reason for his lack of self-assurance, something he passes on to his son Biff. By claiming the sophisticated title of tragedy, Miller emphasizes the importance of what may be taken as plain: the importance of fatherhood in the transition from boyhood to manhood.

Wednesday 3/29 at 2 p.m.

Paul and Jewish Christian Law-Keeping

Kevin John Boyle, Master of Divinity, School of Ministry

The Apostle Paul was adamant that his Gentile converts should not be made to keep the Jewish law. But what did Paul think about Jews who had embraced Jesus as the Messiah? Should they keep the law? Is it not entirely clear. In Galatians 2:11-16, Paul recounts an incident when he stood up to and opposed Peter because he (Peter) was keeping the law. Paul called Peter a hypocrite and said that he stood condemned because of his behavior. However, in Acts 21:17-26, Paul permitted Jewish Christians to keep the law. In fact, he took part in their law-keeping. The question is: why does Paul sometimes object to law-keeping by Jewish Christians and at other times allow it? This paper answers this question through an exegesis of Galatians 2:11-16 and Acts 21:17-26. This paper concludes that, all things being equal, Paul allowed Jewish Christians to keep the law as their custom. However, when Jewish Christian law-keeping distorted the gospel, Paul then objected to it.

Wednesday 3/29 at 2:30 p.m.

Dance: A Trading Zone and Conduit for Interdisciplinary Collaboration

Ericka Squire, Adjunct Instructor of Dance, School of Music and Fine Arts

Dance provides a space for its practitioners (both academically and practically) to investigate dance through many lenses – historically, sociologically, socio-culturally, politically, corporeally and much more. Academically, it promotes interdisciplinary learning by pulling in theories and philosophies of other disciplines through its references and literature used. Practically, interdisciplinary collaborations foster a corporeal trading zone, where the practitioner acquires new bodily knowledge that was not known prior to the interaction. This bodily knowledge can show up choreographically or in the way a practitioner facilitates a choreographic process or dance class. Therefore, this research proposal seeks to outline the ways in which dance can both benefit and promote interdisciplinary learning and collaborations both academically and practically.

Wednesday 3/29 at 3:30 p.m.

The Normalizing of Relations between the United States and Cuba with a Concentration on the Trade Embargo

Jenna Wolfram, Public Relations major, School of Communication and Media; Dr. Elizabeth Stice, Assistant Professor of History, School of Arts and Sciences; and former U.S. Sen. George LeMieux

Enacted in 1960, the Cuban Trade Embargo was implemented under the shadow of the Cold War and the tense relations between the United States and the Soviet Union. With Cuba viewed as a Soviet checkpoint only 90 miles off the Florida coast, the U.S. chose to shut off trade relations in hopes of standing up for democracy.
and human rights. Now 60 years later, the effectiveness and potentially outdated approach of the embargo are being called into question. The Obama Administration chose to soften policy restrictions in hopes of normalizing relations but some argue that this only endorses oppressive governments. In my research, I hope to better investigate the potential outcomes of removing or maintaining the embargo with focus on economic development, human rights and Cuban immigration reforms.

Wednesday 3/29 at 4 p.m.


Talia Fradkin, Biology major, School of Arts and Sciences

During a recent clean-up project at an inner-city park in West Palm Beach, Palm Beach Atlantic University students encountered numerous waste products of drug abuse, including used syringes. However, the issue of poorly-disposed medical waste affects more than just inner-city areas, especially with the increased amount of institutional biomedical waste resulting from contagious diseases like Ebola. Globally, the international trade in hazardous waste has the potential to negatively impact both the environment and humans. This proposal will explore the effects of U.S. policy on medical waste management and the international trade in hazardous waste as well as its impact on the environment and human rights in Florida and worldwide.

Science and Health Care Track

1 - 4:30 p.m.
Wednesday, March 29
Warren Library (Room 208)

Wednesday 3/29 at 1 p.m.

Human Performance Lab at Palm Beach Atlantic University

Dr. Matthew J. Mitchell, Associate Professor of Health and Human Performance, School of Education and Behavioral Studies

This session provides an overview of the impact the Human Performance Laboratory has had on the department of Health and Human Performance, students, the University and surrounding community since its inception three years ago. Specifically, the focus will be on lessons learned about research at PBA and how our department has used research and the laboratory to become the fastest growing department on campus.

Wednesday 3/29 at 2 p.m.

Fifteen Year Follow-up Survey to Assess the Progress of a Cypress-Pond Apple Tree Planting Project in the Arthur R. Marshall Loxahatchee National Wildlife Refuge, Boynton Beach, Florida

Dr. Peggy VanArman, Professor of Biology; Kyle Holly, Biology ’16; Trinity Livingston, Zoology ’16; Austin Peightel, Biology major; David Periard, Marine Biology major; Catherine Wiersma, Biology ’16; and Joel VanArman

Cypress swamps formed large forested parts of the Everglades ecosystem (furnishing habitat and shelter for wildlife) until the 1900s, when a majority of cypress was cut to furnish wood for buildings and commercial interests. A pilot project to restore the community was conducted in 2001 by over 400 volunteers planting more than 6600 cypress (Taxodium ascendens), maple (Acer rubrum) and pond apple (Annona glabra) trees in Impoundment B-3 in the Arthur R. Marshall Loxahatchee National Wildlife Refuge, Boynton Beach, Florida. The first study was conducted in 2007 to determine growth and survival of those trees, and those data were then compared to data from the current study (February 2016). Due to erratic flooded conditions over the years, no maple trees survived, very few pond apples were seen, and remaining trees were cypress. There was significant growth overall, and about 68 percent survival from 2001. The loss of nearly half of the trees between 2001 and 2007 was apparently offset by recruitment of new trees between 2007 and 2016.

Wednesday 3/29 at 2:30 p.m.

Protein and Mitochondrial DNA Analysis of a Hybrid Snapper Resulting from a Lane Snapper X Yellowtail Snapper Cross

Dr. Raymond Waldner, Professor of Biology, School of Arts and Sciences

Lutjanus ambiguus (Poey 1860) is actually a hybrid resulting from a Yellowtail Snapper X Lane Snapper cross, and has been reported from various Western Central Atlantic locations. The electrophoretic banding pattern of white muscle proteins from a representative individual of this hybrid was compared to those from several other sniffers, including representatives of the parental species. We modified the Sorensen Similarity Index to aid in this comparison. The results suggest that the parental species’ genes were nearly equally expressed in the hybrid, and every protein observed in the hybrid was also present in at least one of the parental species. Analysis of mitochondrial DNA allowed the determination of the genders of the respective parents. Protein and mitochondrial cytochrome b gene sequencing data also indicated that the parental species were more alike than they were to Gray Snapper. Our study follows others in suggesting that the relationship between the Yellowtail Snapper and Lane Snapper does not merit separation into distinct genera.

Wednesday 3/29 at 3 p.m.

Assessment of Supplemental Infectious Diseases Instruction through Social Media

Dr. Elias B. Chahine, Associate Professor of Pharmacy Practice; Dr. Jamie L. Fairclough, Assistant Dean for Assessment and Assistant Professor; Aisha Shokoya and Keaton Grant, Pharmacy majors, Lloyd L. Gregory School of Pharmacy; and Dr. Timothy P. Gauthier, Charlie Rose, LLC

This research is to assess students’ perceptions of supplemental infectious diseases instruction through social media. An
infectious diseases pharmacist posted content to active existing Facebook, Twitter and Instagram accounts, by the name of IDstewardship, for an entire semester. Posted content was composed and posted to correspond with topics from the course syllabus. Third-year pharmacy students enrolled in the infectious diseases pharmacotherapy course were informed of the activity and invited to follow at their own discretion. A survey to assess students' perceptions of supplemental infectious diseases instruction through social media was distributed at the beginning and end of the semester. Data were analyzed using descriptive statistics and the Chi-Square test.

**Wednesday 3/29 at 3:30 p.m.**

**Assessing First-Year Pharmacy Student and Faculty Perceptions of Objective Structured Clinical Examinations**

Dr. Anne Harring, Part-Time Assistant Professor of Pharmacy Practice; Dr. Jamie Fairclough, Assistant Dean for Assessment and Assistant Professor; Dr. Dana Brown, Associate Professor of Pharmacy Practice; and Aisha Shokoya, Pharmacy major, Lloyd L. Gregory School of Pharmacy

The use of Objective Structured Clinical Examinations (OSCE) to assess achievement of students’ educational outcomes is encouraged in the 2016 Accreditation Council for Pharmacy Education (ACPE) standards. Methods: A one-station OSCE utilizing standardized patients was developed for first-year pharmacy students. Two Likert scale surveys were administered to students and faculty to assess their perceptions of the OSCEs. The median change in total survey score was used to determine changes in perceptions of students and faculty before and after administering the OSCE. Results: Of the 76 students, 74 students completed both the pre- and post-surveys. The median total score for students was 97.0 ± 13.2 in the pre-survey group versus 105.0 ± 12.8 in the post-survey group (P<0.001). The median total score for faculty was 68.0 ± 3.0 in the pre-survey group versus 69.0 ± 1.5 in the post-survey group. After administering the OSCE, all faculty agreed the OSCE is an effective way to test competencies and it should be part of the assessment program. Conclusion: Student and faculty perceptions of the OSCE were favorable highlighting the importance of incorporating OSCEs into assessment efforts.

**Wednesday 3/29 at 4 p.m.**

**The Cytotoxicity of Vinorelbine when Combined with Nutraceuticals in a MCF-7 Human Breast Cancer Cell Line**

Jessica Hernandez, Pharmacy major; Dr. Adwoa Nornoo, chair of the Department of Pharmaceutical Sciences, Lloyd L. Gregory School of Pharmacy

Over the years, research has focused on the chemo-preventative effects of nutraceuticals as well as their treatment for cancer. These agents when used alone failed to produce the expected outcome in clinical trials; therefore, combinations of nutraceuticals with established anticancer agents are gaining increasing popularity. The results obtained from this study suggest that nutraceuticals in combination with anti-cancer agents can potentially be used in cancer therapy by reducing the dose of neoplastic agents to minimize side effects and maintain efficacy.

**Thursday 3/30 at 1 p.m.**

**The Assignation of Duty and Right to Middle-Class American and English Women in 19th-Century Art**

Saija Wilson, History major, School of Arts and Sciences

This presentation considers the implications of the notion of “separate spheres” in 19th-century England and the United States. The belief in the existence of separate spheres, the public and the domestic, within which men and women, respectively, interacted, resulted in the assignation of duty and right on the basis of gender. This assignation was represented in 19th-century genre art and these representations reinforced the perception of separate spheres. In this way, 19th-century art encouraged specific behavior from women by displaying proper employment, in juxtaposition to improper behavior. Such representations reinforced the anticipation of danger in public spaces to femininity and purity, while instructing middle-class women of their place in society. The works of Mary Cassatt, George Elgar Hicks, Eastman Johnson, Charles West Cope, William Holman Hunt, Seymour Joseph Guy and August Leopold Egg will be examined as evidence of the instruction of the duty and right of middle-class women in 19th-century English and American art.

**Thursday 3/30 at 1:30 p.m.**

**Trauma in Genesis 16**

Dr. Marina Hofman, Adjunct Instructor of Biblical Studies, School of Ministry

Trauma Theory examines the impact of a traumatic experience on the victim’s psyche and its influence on his or her reasoning and subsequent behavior. With the development of Trauma Theory as a biblical interpretive method, one might ask: How would our view of Genesis 16 be impacted by a Trauma Theory reading? This paper seeks to enrich our characterization of Sarai and Hagar and our understanding of Genesis 16 by examining the impact of Sarai’s struggle and suffering as an infertile woman, Hagar’s experience as a concubine, her abuse at the hand of Sarai and then Hagar’s desperate act of running away. It examines the role of the divine messenger in giving voice to Hagar’s pain and his instruction for Hagar to return to the place of her abuse. The responses of Abram and the community are also considered. Finally, this paper discusses how we might draw on a trauma perspective of Genesis 16 to help us to address and respond appropriately to the suffering of people in our church and social communities.
For leaders today, organizational health is a concept that is extremely important but not always easily understood or defined. Furthermore, organizational health is often a difficult characteristic to measure for leaders and the people they lead. The purpose of this research study is to present a new framework for understanding and evaluating organizational health in today’s organizations by examining four key behavioral indicators. In addition, the researcher will propose a new survey instrument that can be used to assess organizational health for teams and organizations of all types and sizes. A literature review will be conducted for the purpose of supporting the theoretical basis for the instrument.

**Thursday 3/30 at 2:30 p.m.**

**Gender Violence: An Ongoing Threat to Latin American Women**

Rita Rivera, Psychology major; School of Education and Behavioral Studies

While gender violence seems to have been addressed in many places of the world, this is not the case for Latin American countries. Violence in Latin America seems to be more gender focused than in other areas of the world. During this presentation, I will provide the definition of gender violence against women, the different factors and theories that attempt to explain this gender fueled violence, and the socio-cultural influences that can cause this issue in Latin America.

**Thursday 3/30 at 3 p.m.**

**Authenticity in Online Education: A Quest for Best Practice**

Dr. Olga Dietlin, Associate Professor of Counseling; and Jeremy Loomis, Marriage, Couple and Family Counseling major, School of Education and Behavioral Studies

Genuineness, or authenticity, has long been established as the core characteristic of engaging, motivating and nurturing teachers. This study has gathered key findings from the interdisciplinary research on the subject of authenticity and has included a mixed methods inquiry about the challenges of cultivating genuineness and authenticity in the online classroom. Is the quest for “trueness” even relevant for those who are limited by the available technology and separated from the learner in space and time? If so, how do we find and cultivate these ways of being and teaching in a virtual environment? Do our students expect our authenticity in the online world, and how do they recognize a genuine encounter? How can educators bring a sense of presence into the virtual classroom? Join us to hear what we learned so far and share your thoughts and experiences in this roundtable discussion.

**Thursday 3/30 at 4 p.m.**

**The Effects of Childhood Trauma on Anxiety in Young Adults**

Jessica Koreis, Sean Goodman, Kristy St. Louis, Maddie Dunning, Psychology majors; and Dr. Angie McDonald, Associate Professor of Psychology, School of Education and Behavioral Studies

Childhood trauma is an adverse experience, before the age of 18, which causes an intense emotional response (National Child Traumatic Stress Network, 2016). Studies have revealed the detrimental lasting effects of adverse childhood experiences are often broad and long lasting. One of the lasting effects that has been found is increased anxiety (Felitti, Anda, 2010; MacMillan, Fleming, Streiner, Lin, Boyle, Jamieson, Duku, Walsh, Wong, & Beardslie, 2001). Anxiety has been characterized as state anxiety, a temporary or current feeling of fear and tension that is subject to change, and trait anxiety, a characteristic or learned behavioral temperament that causes an individual to experience pervasive emotional tension (Spielberger, Gorschuch, & Lushene, 1970). This study sought to investigate a possible correlation between the severity of various childhood traumas and the levels of trait and state anxiety in young adults. It was expected that young adults who had experienced childhood trauma would have higher levels of trait anxiety and more prevalence of high state anxiety.

**Science and Health Care Track 1-4 p.m.**

**Thursday, March 30**

**Warren Library (Room 208)**

**Thursday 3/30 at 1 p.m.**

**Tracking and Evaluating the Global and Biological Threats to the Human Race**

Nicole Freire, Biology major; and Dr. Roger Chapman, Professor of History, School of Arts and Sciences

Bioterrorism is the one of the oldest and, arguably, one of the most effective forms of warfare. Nature, as seen in the Ebola outbreak, is also able to deal a great amount of damage when aided by human negligence, despite advancements that have granted humans a degree of control over nature. The challenges posed by both are further exacerbated by increased global interdependence and political unrest due to failed states as well as insurgencies and the rise of extremists groups. This study will outline the biological and chemical threat, placing it in historical context and tracking its modern developments, specifically identifying a list of 10 significant biological and chemical agents. It will also examine public health policies written in response to national and international incidents, identifying issues likely to be effective in combating future incidents. The findings will be evaluated and methods to prevent or diminish the effects of a biological or chemical terrorist attack will be proposed.

**Thursday 3/30 at 1:30 p.m.**

**Mental Health Promotion and Prevention Program for Higher Education Students**

Professor Linda Casale, Adjunct Instructor of Nursing, School of Nursing

According to the National Alliance on Mental Illness (NAMI), approximately one in five adults in the U.S. – 43.7 million, or 18.6 percent – experience mental illness in a given year. Seventy-three percent of surveyed college students said they experienced a mental health crisis while in college. Women are twice as likely to suffer extremely important but not always easily understood or defined. Furthermore, organizational health is often a difficult
characteristic to measure for leaders and the people they lead. The purpose of this research study is to present a new framework for understanding and evaluating organizational health in today’s organizations by examining four key behavioral indicators. In addition, the researcher will propose a new survey instrument that can be used to assess organizational health for teams and organizations of all types and sizes. A literature review will be conducted for the purpose of supporting the theoretical basis for the instrument.

**Thursday 3/30 at 2 p.m.**

**Changes in Risk Preferences over Repeated Description-Based Decisions**

Mike Chen, Professor of Business Statistics, Rinker School of Business

Two experiments investigated how repeated trials with experienced outcome feedback affect risk preferences in description-based decisions under risk, and if the observed effects of experience generalize across gain and loss domains. In Study 1, participants were initially strongly risk-seeking in the Loss domain, but became less so across 100 repeated trials; no significant trend was observed for Gain problems. Participants then experienced an additional 100 trials of the “reflected” Gain or Loss problem. Observed trial-by-trial trends in risk preferences in these Set 2 trials were similar to those in Set 1; however, the initial proportions of sure-thing choices for Set 2 problems showed shifts in the direction of EV-maximization due to experience with Set 1 problems. To test possible mechanisms underlying the observed effects, Study 2 “endowed” participants facing 100 Gain trials with a large starting loss, and those facing 100 Loss trials with a large starting gain. Endowment with a large starting gain mimicked the effects of prior Gain trials on behavior in Set 2 Loss trials, but endowment with a starting loss did not have an effect. We explore several broad classes of possible explanations for the observed effects of experience on description-based choice, including framing and aggregation effects, learning of risk preferences, and learning of more linear decision weights. In a modeling exercise, the best fit to the data was obtained for a version of Cumulative Prospect Theory that allows for experience-based changes in the shape of the decision weight function over repeated trials of Loss problems, towards more linear decision weights.

**Thursday 3/30 at 2:30 p.m.**

**Effect of Altitude Simulation Training at Sea Level on Aerobic Capacity and Pulmonary Function**

Sean Campbell and Brian Lowe, Exercise Science majors; School of Education and Behavioral Studies

Maximum Oxygen Uptake (VO2max) assessed during maximal exertion is widely considered the “gold standard” to assess aerobic capacity. A recent trend is the use of high altitude training (via acclimatization to environmental hypoxia) which initiates a series of metabolic and musculoskeletal-respiratory adaptations that influence oxygen transport and utilization. With limited access to high altitude, “altitude simulation” via breathing masks has recently become available and 16 subjects were recruited for the study and placed in trained or control groups. Trained groups engaged in at least three days a week of moderate/heavy exercise activity with a Training Mask™ 2.0 altitude mask. This study examined the effect of altitude simulation breathing masks on VO2max and measures of pulmonary function using a Flow-Volume Loop and Maximum Voluntary Ventilation (12sec). Ultrasound images were analyzed for diaphragm thickness, change in thickness with respiration and diaphragm excursion amplitude during spontaneous breathing.

**Thursday 3/30 at 3 p.m.**

**Mechanisms Underlying Exercise-Induced Reductions in Cancer-Related Fatigue**

Jessica Harris and Jaimie Gasch, Exercise Science majors; Dr. Matthew J. Mitchell, Associate Professor of Health and Human Performance; Dr. Stephen Sylvester, Assistant Professor of Health and Human Performance, School of Education and Behavioral Studies; and Dr. Jim Mitroka, Associate Professor of Pharmaceutical Sciences, Lloyd L. Gregory School of Pharmacy

This study investigated the effect of eight weeks of resistance exercise training on salivary cortisol and C-reactive protein levels in cancer patients. Fatigue specific to cancer etiology and treatment (CRF) is found in the majority of cancer patients and may persist for years after treatment completion. It has been shown that low to moderate physical activity may assist in ameliorating fatigue symptoms and improve quality of life. The mechanisms both behind CRF and the mechanism of its improvement are not well understood. This study found improvements in functional capacity, walking distance and “chair-to-stand” ability.

**Thursday 3/30 at 3:30 p.m.**

**Exercise and Depression: Role of Brain-Derived Neurotrophic Factor (BDNF) Genotype**

Dan Farrokh, Exercise Science ‘16; Matthew J. Mitchell, Associate Professor of Health and Human Performance, School of Education and Behavioral Studies; and Dr. Jim Mitroka, Associate Professor of Pharmaceutical Sciences, Lloyd L. Gregory School of Pharmacy

Exercise has been cited as one means of treatment for individuals suffering from major depressive disorder (MDD), however, the biological link between exercise and susceptibility to MDD is unproven. Recently, studies have emerged that indicate that exercise and mental health may interact through the growth factor, brain-derived neurotrophic factor (BDNF). Specifically, the BDNF Met allele (a methionine amino acid group at codon 66) is specifically linked to mental disorder and an inclination to exercise activity. In order to fully demonstrate the role of BDNF in exercise and mental health, this study recruited 43 college-aged students (27 female, 16 male). Fitbit™ Charge HR devices were used to record 24 hour physical activity, heart rate and estimated caloric output. Quantifiable estimation of depression was made by completion of the Depressive Inventory II (BDI II) by each subject. This study elucidated the role of BDNF allele in both depression and chronic exercise activity.
The Effects of Sprint Interval Training on Anaerobic Threshold in Collegiate Women Basketball Athletes

Nikkira Brown, Exercise Science major, School of Education and Behavioral Studies

Eleven female collegiate basketball players underwent a six-week sprint interval training. Before and after the training program, maximal oxygen intake (VO2max), body composition (percent body fat, fat mass and lean body mass), lateral quickness and visual reaction time. The results showed a slight improvement in overall body composition, with no change in body mass index (BMI). Relative VO2max increased in ten of the eleven subjects and was significantly increased pre v post testing (48.55 v. 52.8 ml/kg/min). Treadmill time significantly improved (p<0.05), though no changes in anaerobic threshold were seen. Significant improvements in visual and lateral reaction time (p<0.05) were also found. The results of this study verify that a six-week sprint interval workout can decrease or maintain body fat, and increase maximal oxygen intake.

Varied Lateral Reaction Times in Collegiate Female Athletes: Role of Bilateral Visual Reaction Time

Dr. Matthew J. Mitchell, Associate Professor of Health and Human Performance; and Grace Patterson, Mikaeli Hassell, Nikkira Brown, Exercise Science majors, School of Education and Behavioral Studies

Visual reaction time (VRT) is the time elapsed from visual stimulus until a physical response. Visual reaction time is correlated with overall speed, lateral quickness (LRT) and essential in athletic performance. VRT and LRT were measured in 52 collegiate female athletes (12 basketball - BB, 15 softball – SB, 25 soccer - SOC) prior to pre-season training program. A FitLight Trainer™ wireless system quantified VRT and LRT – SB, 25 soccer - SOC) prior to pre-season training program. There was no statistically significant increase in body mass which supports passed findings. There was a significant increase in body mass which supports passed findings.

Effect of Creatine Supplementation on Water Retention on Fat Free Mass Calculation Using Body Plethysmography

Cody DeBoer, Human Performance and Sport ’16, School of Education and Behavioral Studies

Chronic supplementation with creatine monohydrate has been shown to promote increases in total intramuscular creatine, phosphocreatine, skeletal muscle mass, lean body mass and muscle fiber size. Creatine also increases skeletal muscle water retention, which itself may alter body composition measurement via bioelectrical impedance and whole body plethysmography (Bod Pod”). This study examined the effect of short-term creatine supplementation on body composition measurement and water retention. Eight college-age males participated in a 25-day study, which included a 5-day creatine loading phase (20g/day) and a 20 day maintenance phase (5g/day). An increase in body mass (kg) was found from BM1 v BM3 (p<0.05). While there were trends there were no statistically significant changes in percent body fat or percent fat free mass, however there were trends. There was a significant increase in body mass which supports passed findings.

Reduced Blood Lactate Concentrations Following “Healthy” Pre-Exercise Meal Ingestion in Collegiate Softball Players

Kayla Knight, Exercise Science major, School of Education and Behavioral Studies

Diet has been shown to acutely alter systemic acid/base balance. Changes in pH alter adenosine triphosphate (ATP) phosphorylation and conversion of a more alkaline diet may benefit exercise performance via improved ATP production and reduced glycogen depletion. Collegiate softball players were given either an “alkaline” or “acidic” meal prior to two types, a 1) practice session and 2) simulated game. There was a statistically significant increase in blood lactate (p<0.05) with the “acidic” meal group after both sessions (compared to pre-exercise). There was no statistically significant increase with the “alkaline” meal. An “alkaline” meal appears to blunt elevated blood lactate responses typically found after intense exercise.

Anthropogenic Movement of Benthic Macrofauna by a Sediment Transfer Station

Alaina Bell, Joshua Rowe, Biology majors; and Dr. Angela D. Witmer, Assistant Professor of Biology and Oceanography, School of Arts and Sciences

Jetties, which interrupt the longshore transport of sediments, are built along inlets to maintain navigable waters. Sediment transfer stations pump accumulated sediment from the updrift side to sediment-starved downdrift side of the jetty, continuing longshore transport. As benthic macrofauna are located within these sediments, we hypothesized they would also be relocated in this process. This study analyzed effects of Boynton Beach Sediment Transfer Station on subtidal macrofaunal assemblages and beach sediments. Sediment samples were collected and sieved through a 1 mm bag sieve. Remaining materials were taken to the lab for sorting and analysis. Anthropogenic relocation of live macrofauna via sediment transfer station was confirmed. Macrofaunal communities adjacent to the sediment transport station were similar. Some species were found to be more abundant in the updrift borrow pit than in the controls or deposition locations. Sediment analysis revealed larger grain sizes on the downdrift side of the inlet. Although hard coastal structures such as jetties decreases the ability for marine macrofauna to migrate naturally, the sediment transport station aided in the dispersal of local macrofauna.

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**Health and Fitness Related Indicators of Disease in PBA Students: A Three-Year Investigation**

Dr. Matthew J. Mitchell, Associate Professor of Health and Human Performance; Denise Brietkreuz, Assistant Professor of Health and Human Performance; Cody DeBoer, Human Performance and Sport '16; Jaimie Gasch, Jessica Harris, Emily Nickell, Grace Patterson, and Tanner Young, Exercise Science majors; and Sara Orbe, Human Performance and Sport major; School of Education and Behavioral Studies

The American College of Sports Medicine (ACSM) recommends individuals of all ages engage in exercise at least thirty minutes a day, five days a week (ACSM guidelines, 2013). Regular physical activity has been known to be associated with reduced risk of cardio-vascular disease stroke, diabetes mellitus, osteoporosis, certain forms of cancer and numerous other chronic diseases. Even in younger populations, the necessity of daily exercise to improve health and wellness later in life is essential (ACSM guidelines, 2013). This study looked to discover the extent of risk factors in Palm Beach Atlantic University students and, secondarily, differences among undergraduate majors.

**Role of Stride Length on Baseball Velocity in Experienced Pitchers**

Joe Nunez, Human Performance and Sport major, School of Education and Behavioral Studies

In baseball, leg drive influences throwing power via the kinetic chain and stride length. This study recorded changes of velocity between the normal pitching stride with both forced 5 percent increases and decreases in stride length (compared to subject height). This study examined whether decreased ball velocity would occur as a result of altered lower body biomechanics when stride length was adjusted. Ten college-age players were recruited to perform in this study. The results showed that under-striding statically significantly ($p < 0.001$) decreases velocity of a thrown ball, but does not have the same effect on velocity when over-striding. The results further show that a ball thrown while under-striding decrease on average by 1.664 ± 1.310 miles per hour, while a ball thrown while over-striding increases in velocity by 1.661 ± 2.990 miles per hour on average.

**Anemia Indicators in Collegiate Female Athletes and Effect on Performance**

Grace Patterson, Exercise Science major, School of Education and Behavioral Studies

This study examined the effect of lower hemoglobin levels in female collegiate soccer players on performance. Hemoglobin mass levels were measured before and after a competitive season. Body fat percentage, weight, and height were also taken pre- and post-season. No significant differences were found before or after the competitive season in hemoglobin mass or any other values measured. Also, no correlations were found between hemoglobin mass and endurance performance or minutes played during the competitive season. Freshman players exhibited slightly higher changes HgB levels than more experienced players.

**Social Correlates of Personality and Decision Behavior in Abuse Survivors**

Shelby Wood, Emily Sierra, and Bertnie Jeanniton, Psychology majors; and Dr. Chandrima Bhattacharya, Assistant Professor of Psychology; School of Education and Behavioral Studies

Previous research has found that suffering from abuse as a child or as an adult can influence our personalities. However, whether abuse impacts decision making has not been researched thoroughly. In our study we examined the age at which abuse occurred as well as the type of abuse (neglect, physical, psychological and sexual) on personality and decision making styles. We also compared it with people who do not have any history of abuse. We found that victims who suffered from childhood abuse presented greater elevations in self-blaming, negative affects and lower locus of control in comparison to adult victims and normal cohorts. They were also high on both active and passive risk-taking, whereas adult victims of abusive relationships were high on vulnerable attachment, dependency and resistance to change. They also showed more indecisiveness, passive risk-taking behavior and decision regret. Both children and adult victims had lower self-esteem. We also found that victims of sexual abuse showed elevated levels of self-blame and lower self-esteem in comparison to the other types of abuse.