

2019 Fall Academic Showcase

A Celebration of Florida Southern College
Student Scholarship and Research

Wednesday, December 4, 2019
6:00pm–8:00pm

Christoverson Humanities Building



Sponsored by the Florida Southern College Chapter of the Honor Society of Phi Kappa Phi

2019 Fall Academic Showcase

A Celebration of Florida Southern College Student Scholarship and Research

December 4, 2019

Welcome!

Florida Southern College fosters an environment where students actively transition from being consumers of knowledge to becoming scholars who create new knowledge, insights, connections, and understanding. At the end of every semester, our students gather to present and discuss the scholarly work they have been doing in and beyond their courses.

The goal of these academic showcases is twofold: to provide students a platform for their ideas, and to provide the wider community a window into the creative and intellectual energy that pervades our campus.

We encourage you to take part in as many sessions as you can! Enjoy the conversation.

Schedule

6:00pm-6:15pm..... Welcome Remarks Dr. Brian Hamilton
6:20pm-8:00pm..... Student PresentationsChristoverson Humanities Building

2019 Fall Academic Showcase Presenters – By Last Name

Room	Time	First Name	Last Name	Major	Title
Christoverson 207	7:20-7:40	Sarah	Bauman	Marine Biology	Ideal Laboratory Growth Conditions and Antibiotic Susceptibility of <i>Helicobacter ceterum</i>
Christoverson 207	7:40-8:00	Jacqueline	Carlton	Mathematics	The Statistics of the Oscars
Christoverson 207	6:20-6:40	Felicia	Coursen	English	Assessing the Vanishing Lesbian in Book-to-Film Adaptations: A Critical Study of Rebecca, Fried Green Tomatoes, and Black P
Christoverson 206	6:20-6:40	Jaydon	Gibbs	Philosophy	An Applied Ethics for Emergency Medical Services
Christoverson 208	6:40-7:00	Daria	Gill	Elementary Education	Representation of People with Disabilities in Young Adult Novels
Christoverson 209	6:20-6:40	Emily	Glidden	Biology	Characterizing the Parkinson's Disease Associated Protein α -synuclein Interaction with Synaptic Protein Annexin-A2
Christoverson 206	7:40-8:00	Ryan	Glynn	Self-Designed Major	The Efficient Kingdom
Christoverson 208	6:20-6:40	Amanda	Grisanti	Art: Film	Feature Screenplay Proposal
Christoverson 209	6:40-7:00	Chloe	Kindell	Psychology	Back to the Drawing Board: A Study on Self-Directed Pedagogy and Visual Learning
Christoverson 209	7:00-7:20	Jessica	Korver	Music: Music Management	Facing the Music: The Current State of Streaming Services in the Music Industry
Christoverson 207	6:40-7:00	Tabatha	Lehmann	English	The Relationship Between Stress, Resilience, and Ego-Depletion in Undergraduate Students
Christoverson 206	6:40-7:00	Jordan	Martin	Psychology	The Effects of Working Memory Capacity on Implicit Attitudes Towards Gender Stereotypes
Christoverson 206	7:00-7:20	Tiana	Minks	Psychology	The Role of Creativity in Gifted Education
Christoverson 208	7:40-8:00	Brandy	Nelson	Elementary Education	Transition from Classroom Teacher to School Administrator
Christoverson 208	7:00-7:20	Michaela	Peterson	Biology	Identification of Annexin-A5 and α -Synuclein Interaction in the Presence of Synaptic Vesicles under Conditions that Mimic P

2019 Fall Academic Showcase Presenters – By Last Name

Christoverson 206	7:20-7:40	Emily	Ready	Psychology	Innocent Until Identified: The Relationship Between Police Training and Eyewitness Identification
Christoverson 208	7:20-7:40	Shealyn	Robinson	Biology	Analysis of Annexin A6 Interactions with Alpha Synuclein in the Presence of Synaptic Vesicles
Christoverson 209	7:20-7:40	Samantha	Stackpole	Exercise Science	The Association of Proprioceptive Ability with Rates of Injury in College Athletes
Christoverson 209	7:40-8:00	Morgan	Yates	Biology	Antibiotic Properties and Classification of Chromobacterium

2019 Fall Academic Showcase Presentations – By Room and Time

Christoverson 206

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7:20-7:40	Sarah	Bauman	Marine Biology	Ideal Laboratory Growth Conditions and Antibiotic Susceptibility of <i>Helicobacter cetorum</i>
7:40-8:00	Jacqueline	Carlton	Mathematics	The Statistics of the Oscars

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7:40-8:00	Morgan	Yates	Biology	Antibiotic Properties and Classification of Chromobacterium

2019 Fall Academic Showcase Presentations

Student: Bauman, Sarah

Major: Marine Biology

Faculty Mentor: Dr. Melanie Langford

Presentation Type: Oral

Presentation Time: 7:20-7:40

Room: Christoverson 207

Title: Ideal Laboratory Growth Conditions and Antibiotic Susceptibility of *Helicobacter cetorum*

Abstract: The *Helicobacter* genus is a diverse group of bacteria that cause gastrointestinal disease in a variety of hosts. *Helicobacter pylori* is highly prevalent and causes gastritis, gastric ulcers, and carcinomas. Many *H. pylori* genes involved in antibiotic resistance have been identified and sequenced. Clarithromycin, metronidazole, and levofloxacin are common antibiotics used to treat *H. pylori* infections. In addition to *H. pylori*, there are numerous *Helicobacter* sp. that can infect most terrestrial mammals. Less is known about *Helicobacter* sp. that infect marine mammals, and *Helicobacter cetorum* was the first species found to infect cetaceans. *H. cetorum* is correlated with gastric pathology in dolphins, whales, and seals, and only one publication has studied *H. cetorum* in the lab. Here, we aim to expand the existing knowledge on *H. cetorum*. We will measure the growth of *H. cetorum* in several environmental conditions, perform the first series of tests to determine its susceptibility to a variety of antibiotics, and PCR-amplify and sequence genes involved in antibiotic resistance. Our results may have clinical significance for veterinarians working with marine mammals.

Student: Carlton, Jacqueline

Major: Mathematics

Faculty Mentor: Dr. Susan Serrano

Presentation Type: Oral

Presentation Time: 7:40-8:00

Room: Christoverson 207

Title: The Statistics of the Oscars

Abstract: The trends and correlations in the Academy Awards have been in the public eye for years. These trends may lead to the ability to eventually predict winners out of a group of nominees in each category, if we can identify enough trends. This study will analyze the Oscars, and identify the type of nominee that is most likely to win in each category. This study strives to understand trends in the Oscars, and find correlations between a winning entity and different variables (examples include genre, gender, number of previous nominations, etc). The study will be using statistical methods such as multivariable ANOVA analysis, and regression analysis along with other discrete choice models to calculate the trends that will be the most effective in predicting the winners in each category. Its goal is to explain the different factors that go into an Oscar nominee becoming an Oscar winner, and be able to predict those winners given information about the nominees.

2019 Fall Academic Showcase Presentations

Student: Coursen, Felicia

Major: English

Faculty Mentor: Dr. Jennifer Moffitt

Presentation Type: Oral

Presentation Time: 6:20-6:40

Room: Christoverson 207

Title: Assessing the Vanishing Lesbian in Book-to-Film Adaptations: A Critical Study of Rebecca, Fried Green Tomatoes, and Black P

Abstract: Both scholarly and colloquial discussions about representation in the arts have become increasingly relevant in the past few years within the United States. Minority voices, and their supporters, are speaking out against the dissonance between stories created by/about the white, male middle-class elite versus stories created by/about minority groups. The lesbian community is one which has been consistently disregarded within popular media. This honors thesis will focus on the role that three book-to-film adaptations have had in both sharing and erasing the experiences of lesbian characters. These texts include the following: Rebecca (1938) written by Daphne Du Maurier, Fried Green Tomatoes at the Whistle-Stop Café (1987) written by Fanny Flagg, and the Black Panther: World of Wakanda series (2016-2017) written by Roxane Gay, Yona Harvey, and Ta-Nehisi Coates (and others) and illustrated by Alitha E. Martinez and Roberto Poggi (and others). The film adaptations include the following: Alfred Hitchcock's Rebecca (1940), Jon Avnet's Fried Green Tomatoes (1991), and Ryan Coogler's Black Panther (2018). This honors thesis project aims to illuminate these instances of lesbian erasure in the book-to-film adaptations in order to re-emphasize the ways in which popular media silences the voices of minority groups.

Student: Gibbs, Jaydon

Major: Philosophy

Faculty Mentor: Dr. H. A. Nethery

Presentation Type: Oral

Presentation Time: 6:20-6:40

Room: Christoverson 206

Title: An Applied Ethics for Emergency Medical Services

Abstract: In this project, I will seek to establish an applied ethics for EMTs and Paramedics to evaluate the moral dilemmas faced in emergency medical services (EMS). To do this, I will first outline the major ethical systems and provide a framework through which each system can be evaluated. Next, I will explain the structure of EMS to the extent necessary for this project. Finally, I will demonstrate numerous scenarios, each featuring a major ethical dilemma; I will run each scenario through various ethical systems to determine which best guides correct decision making and moral reasoning. Currently, the extent of ethical guidance for emergency medical services is limited to a small section of the preparatory chapter of EMS textbooks, a brief EMT moral oath, and a few academic articles. Clearly, there is a need - in both the professional and academic spheres - for an analysis of moral reasoning in prehospital emergency medicine; this project is intended to fulfill that need.

2019 Fall Academic Showcase Presentations

Student: Gill, Daria

Major: Elementary Education

Faculty Mentor: Dr. Rebecca Powell

Presentation Type: Oral

Presentation Time: 6:40-7:00

Room: Christoverson 208

Title: Representation of People with Disabilities in Young Adult Novels

Abstract: Over the past few decades, research on the importance of representation in educational materials and settings has been studied. This research overwhelmingly suggests that representation of diverse groups is beneficial in schools, as it helps students feel accepted and seen. Additionally, students can become educated on groups of people that they otherwise would not learn about. Though this research exists, there is still an extreme lack of representation in children's literature of people with disabilities. I will explore why it is important that people with disabilities are represented in children's literature. As middle school years can be especially difficult for students in regards to feeling accepted and finding themselves, I will argue for the importance of young adult literature that includes characters with disabilities. Additionally, young adult literature will be analyzed to find what has been written to include characters with disabilities, and if these books represent people with disabilities in an accurate and realistic way.

Student: Glidden, Emily

Major: Biology

Faculty Mentor: Dr. Susan Banks

Presentation Type: Oral

Presentation Time: 6:20-6:40

Room: Christoverson 209

Title: Characterizing the Parkinson's Disease Associated Protein α -synuclein Interaction with Synaptic Protein Annexin-A2

Abstract: The second most common neurodegenerative disorder in the world is Parkinson's Disease (PD). Current treatments for PD only lessen the severity of symptoms and do not halt the progression of the disease due to the lack of information regarding the molecular pathology of the disease. PD may be better understood through experiments determining the underlying molecular biology of the disease. In neurons, α -synuclein is a synaptic protein that is linked to PD when it aggregates due to mutation or overexpression. α -Synuclein aggregation is thought to affect many cellular structures and functions, such as synaptic vesicle trafficking (SV). SV is a process that regulates communication between neurons. This study examines the relationship between α -synuclein and Annexin A2, which is a synaptic protein known to work in SV and may be malfunctioning when interacting with α -synuclein aggregates. Protein pull-down and Western Blot assays were used to examine the interaction between these two proteins without the presence of other cellular components. The results of these experiments show that an interaction between the proteins does not occur without the presence of other cellular components. Therefore, future studies conducted will examine this interaction in the presence of additional cellular components, such as synaptic vesicles.

2019 Fall Academic Showcase Presentations

Student: Glynn, Ryan

Major: Self-Designed Major

Faculty Mentor: Prof. Mike Tracy

Presentation Type: Oral

Presentation Time: 7:40-8:00

Room: Christoverson 206

Title: The Efficient Kingdom

Abstract: William Edwards Deming, a statistician whose philosophies of continuous improvement and collectivism within an organization laid the foundation for the Six Sigma methodology, once said that “if you do not know how to ask the right question, you discover nothing.” Historically, the Walt Disney Company, specifically its theme parks and resorts division, has embodied this ideology because, by successfully asking the “right questions,” the company has been able to identify the values, needs, and desires of its guests so that it can better satisfy them, employ courteous and helpful cast members, and create happiness and magic for families all over the world. Ironically, although new technological advancements enable Disney to collect more data on its guests than it ever could before, the company’s ability to effectively utilize that information to improve guest satisfaction has become diluted in favor of improving resort efficiency. These two main facets of business must be married and equally represented in order to maintain a successful entertainment company; however, Disney could easily risk damaging its brand and reputation by valuing efficiency higher than quality. As a result, The Walt Disney Company’s ability to answer the “right questions” is beginning to falter, and the root cause of this problem, as well as potential solutions, can be identified within its marketing and data analytics efforts.

Student: Grisanti, Amanda

Major: Art: Film

Faculty Mentor: Prof. Matthew Herbertz

Presentation Type: Oral

Presentation Time: 6:20-6:40

Room: Christoverson 208

Title: Feature Screenplay Proposal

Abstract: This presentation discusses my proposal to create a feature length screenplay. Concentrating on topics such as mental health, monotony, and women's studies, this screenplay will follow main character Grace. Grace is a 22-year-old recent college graduate who takes a job as a receptionist in hopes of working her way up the corporate ladder. Due to a series of personal and professional events, Grace begins to feel as if her life is spiraling out of control. Unable to make sense of her life or the options that face her, Grace checks herself into the psychiatric unit of a hospital where she meets Hannah. Hannah is a 25-year-old drug addict with Schizoaffective Disorder who also struggles to maintain control. Through this unlikely friendship, Grace gains the confidence and insight to take back her life. After I have finished writing this script, I plan to film one scene to be shown alongside my screenplay presentation at Fiat Lux in the spring of 2020. This proposal includes background on the project, research, potential obstacles, a timeline for writing, and possible outcomes with the completion of this project.

2019 Fall Academic Showcase Presentations

Student: Kindell, Chloe

Major: Psychology

Faculty Mentors: Dr. Leilani Goodmon and Dr. Patrick Smith

Presentation Type: Oral

Presentation Time: 6:40-7:00

Room: Christoverson 209

Title: Back to the Drawing Board: A Study on Self-Directed Pedagogy and Visual Learning

Abstract: The purpose of this study was to examine the effect of self-created study materials on memory. Participants utilized one of four different methods of study to memorize fifteen pairs of words- reading sentences, viewing drawings, writing sentences, or creating drawings. Memory was measured at two testing intervals- one shortly following memorization, and one at a two-week interval. It was hypothesized that participants that created their own images to study would have the highest rate of recall at both intervals, due to interacting with the content at a deeper level. However, this group of participants showed great variation in memory scores for the word list, showing some of the lowest scores overall. This lack of support for an advantage of self-created visual content might be due to anxiety related to artistic ability. Further research may include an investigation of how artistic ability might interact with the type of content to produce differences in memory for the study items.

Student: Korver, Jessica

Major: Music: Music Management

Faculty Mentor: Dr. Silviana Falcon

Presentation Type: Oral

Presentation Time: 7:00-7:20

Room: Christoverson 209

Title: Facing the Music: The Current State of Streaming Services in the Music Industry

Abstract: As music streaming services like Spotify and Apple Music have increased in popularity among consumers, their potential revenues have become of a great concern to the music industry. Allowing users to pay for unlimited music for as low as five dollars a month, these services on the surface level do not seem to have the artist's interests in mind. It is becoming increasingly important to a variety of people within the music industry to find the true impact of music streaming services. This study examined the data of music streaming services based on the revenue they generate for artists. It also investigated current Industry opinions of music streaming services, and Consumer awareness. Both Industry and Consumer groups reported that artist revenue rates are insufficient and recommend a higher compensation rate. Additionally, results of the Industry Survey pointed to no statistically significant factors, such as genre or age, influencing artist revenue. Variables from the Consumer Survey including age, education level, and whether or not they had a paid streaming account motivated their streaming hours and which service they use most. The Industry group recommended that streaming services offer more features to artists as well as greater transparency.

2019 Fall Academic Showcase Presentations

Student: Lehmann, Tabatha

Major: English

Faculty Mentor: Dr. Patrick Smith

Presentation Type: Oral

Presentation Time: 6:40-7:00

Room: Christoverson 207

Title: The Relationship Between Stress, Resilience, and Ego-Depletion in Undergraduate Students

Abstract: The transition from high school to college is a trying time for many undergraduate students. The change in location, separation from friends and family, and inevitable shift in social culture is drastic and can often be jarring, especially for those who are just starting the challenging immersion into young adulthood (Friedlander, Reid, Shupak, & Cribbie, 2007). Although many undergraduate students experience similar levels of elevated stress, studies have shown that some are more prone to the effects of stress than others (Haidar, Vries, Karavetian, & El-Rassi, 2018). While there are a multitude of factors that can impact individual susceptibility to stress, personal resilience, which can be defined as one's capacity to recover from difficult situations, is a strong correlating component that could determine why some students seem to cope with stress better than others. By evaluating students' resiliency and measuring individual stress levels using ego-depletion tasks, one could discover if resiliency impacts how proficient first-through-fourth-year undergraduate students are with managing stress. By identifying a possible cause, conclusions could potentially be drawn as to how to further prevent high stress levels in undergraduate students.

Student: Martin, Jordan

Major: Psychology

Faculty Mentor: Dr. Leilani Goodmon

Presentation Type: Oral

Presentation Time: 6:40-7:00

Room: Christoverson 206

Title: The Effects of Working Memory Capacity on Implicit Attitudes Towards Gender Stereotypes

Abstract: It is no secret that attitudes are complex psychological constructs, and thus individual differences arise in attitudes towards people, things, or ideas. Two cognitive processes have an influence on one's attitudes: explicit (i.e., deliberate and conscious awareness or belief) and implicit (i.e., unconscious control or belief). Stereotypes develop when generalizations are formed about a specific group, and these generalizations guide implicit attitudes. People are able to make quicker associations when ideas are consistent with a stereotype (e.g., in gender stereotypes, people can recognize the association between "male" and "office" quicker than "female" and "office"). Working memory capacity (WMC) has been described as the ability to hold information in the immediate consciousness to be used following the storage of that information. Individual differences in WMC influence cognitive tasks. Previous research focuses on self-regulatory behavior, suggesting that individuals with lower WMC are less capable of inhibiting implicit processes over explicit; therefore, implicit processes have stronger influences. The purpose of this study is to determine if these effects of WMC on implicit behavior can be generalized to the gender stereotype of females providing for the family and males remaining in the workplace, using the Implicit Association Test

2019 Fall Academic Showcase Presentations

Student: Minks, Tiana

Major: Psychology

Faculty Mentor: Prof. Melanie Law

Presentation Type: Oral

Presentation Time: 7:00-7:20

Room: Christoverson 206

Title: The Role of Creativity in Gifted Education

Abstract: Gifted students can typically be identified by varying combinations of above-average skill, creativity, and commitment to a task, according to Renzulli's Three-Ring Model. While gifted students possess skill sets that distinguish them from the general population, they often also face a distinct set of problems throughout their education. Research suggests that students with uniquely high IQ scores can struggle emotionally and behaviorally in school. Their above-average skills do not automatically negate their need for extra attention or assistance in the classroom. Additionally, even if a gifted student has no emotional or behavioral difficulties, they should be challenged intellectually by their teachers, just as those with average and below-average abilities. This is a qualitative study which focuses on the role that creativity plays in gifted students' education. I will interview several teachers of gifted students in regard to their opinions on and incorporation of creativity in their curricula. These teachers' responses will be analyzed and coded in a way that indicates how and to what extent creativity meets the needs of gifted students in their education.

Student: Nelson, Brandy

Major: Elementary Education

Faculty Mentor: Dr. Lori Rakes

Presentation Type: Oral

Presentation Time: 7:40-8:00

Room: Christoverson 208

Title: Transition from Classroom Teacher to School Administrator

Abstract: The purpose of this study is to identify key qualities and characteristics that may influence transition from classroom teacher to school administrator. The study will attempt to determine a possible correlation between age the transition from teacher to administrator occurred, the number of years spent as a classroom teacher, and the gender of the administrator with the ease of transition they experienced and provide information about the transition from teacher to school administrator from a current school administrator's perspective. This mixed-methods study will survey and interview select participants. The surveys will be used to examine the ages, gender, years of experience, the age the school administrator transitioned from teacher to administrator and the participants' perceived ease of transition. In addition, interviews seek information regarding the experienced transition to seek themes that can be connected back to ages, gender, years of teaching experience, the age the school administrator transitioned from teacher to administrator and the participants' perceived ease of transition. While different aspects of the transition and experiences after the transition from classroom teacher to school administrator have been studied previously, there is little research that covers how different characteristics may influence the actual transition from classroom teacher to school administrator.

2019 Fall Academic Showcase Presentations

Student: Peterson, Michaela

Major: Biology

Faculty Mentor: Dr. Susan Banks

Presentation Type: Oral

Presentation Time: 7:00-7:20

Room: Christoverson 208

Title: Identification of Annexin-A5 and α -Synuclein Interaction in the Presence of Synaptic Vesicles under Conditions that Mimic P

Abstract: Parkinson's Disease (PD) is a neurodegenerative disorder characterized by a loss of neurons involved in motor control. Normally, neurons communicate via neurotransmitters released at the synapse. In PD patients, trafficking of the neurotransmitter-containing synaptic vesicles is disrupted due to mutations in or overexpression of the protein α -synuclein. Due to the lack of understanding of the targets of α -synuclein, the development of treatments for PD has not progressed. One way excess α -synuclein may be altering the exo- and endocytic processes is by inhibiting the function of other synaptic vesicle trafficking regulatory proteins. Examples of these regulatory proteins are members of the Annexin family. Binding interactions have been observed between aggregated α -synuclein and Annexin-A5, indicating that this protein may also have a role in the progression of PD. This possible interaction may lead to Annexin-A5 dysfunction and the impairment of synaptic vesicle recycling. The binding interactions between α -synuclein and Annexin-A5 in the presence of synaptic vesicles will be identified under conditions that mimic PD. An increase in the understanding of these interactions may lead to the development of future treatments and an improved ability to diagnose patients with PD.

Student: Ready, Emily

Major: Psychology

Faculty Mentors: Dr. Charlie Law and Dr. Deah Quinlivan

Presentation Type: Oral

Presentation Time: 7:20-7:40

Room: Christoverson 206

Title: Innocent Until Identified: The Relationship Between Police Training and Eyewitness Identification

Abstract: Although past researchers have acknowledged the importance of specific techniques within the administration of lineups to eyewitness, there is a lack of research that examines how training within departments can affect how police officers carry out these procedures. The purpose of the current study is to identify the effectiveness of proper training of the DOJ guidelines regarding eyewitness lineup procedures of law enforcement officers. We predict that the training on eyewitness identifications will significantly improve police officers knowledge on how to properly conduct a lineup. As of 2019, it is not required to implement the DOJ guidelines within department policies. This is a systemic issue that is not only influenced by the procedures that take place with in the interview process, but begins with the type of training given in order to ensure the accuracy of the procedure itself. If our hypotheses are supported, this research can be used to demonstrate the need for DOJ guidelines to be incorporated within every department's policy and training programs. Effective training will not only impact the police officers knowledge and understanding of these topics, but this research could also impact the amount of wrongful conviction that take place within the U.S. annually.

2019 Fall Academic Showcase Presentations

Student: Robinson, Shealyn

Major: Biology

Faculty Mentor: Dr. Susan Banks

Presentation Type: Oral

Presentation Time: 7:20-7:40

Room: Christoverson 208

Title: Analysis of Annexin A6 Interactions with Alpha Synuclein in the Presence of Synaptic Vesicles

Abstract: Mutations in, or increased levels of, a small membrane binding protein called α -synuclein have been linked to the cellular dysfunction associated with Parkinson's Disease (PD), a neurodegenerative movement disorder. In a healthy neuron, little is currently known about the function of α -synuclein. α -Synuclein normally localizes at synapses, the point of communication between two neurons. However, excess α -synuclein disrupts cellular processes in synaptic vesicle trafficking. Specifically, this protein affects mechanisms required for release of neurotransmitter from synaptic vesicles via exocytosis, and internalization of the plasma membrane through endocytosis. Annexin A6, a member of the Annexin family of synaptic proteins, is known to regulate these exocytic and endocytic processes. One way excess α -synuclein may contribute to synaptic defects may be through binding to and altering the function of Annexin A6. The relationship between α -synuclein and Annexin A6 will be investigated in the presence of synaptic vesicles to determine how Annexin A6 localization and function are altered in the presence of α -synuclein. These findings may offer insight into how these protein-protein interactions affect the onset of neurodegeneration leading to PD.

Student: Stackpole, Samantha

Major: Exercise Science

Faculty Mentor: Dr. David Rice

Presentation Type: Oral

Presentation Time: 7:20-7:40

Room: Christoverson 209

Title: The Association of Proprioceptive Ability with Rates of Injury in College Athletes

Abstract: Background: Proprioception is the ability to determine the spatial location of a given part of the body. Proprioception can provide information about a current movement in the form of feedback, in addition to collecting and storing information about a past movement for use during the next repetition, or when processing information about the execution of a new movement. Purpose: The purpose of this experiment will be to determine whether proprioception is associated with the prevalence of injury among college athletes. Previous work has assessed specific injuries and the injury's effect on proprioception, but none to our knowledge have assessed the correlation between levels of proprioception and rates of injury. Methods: The subjects will be given tests to determine their level of proprioception. The subjects will then be given a questionnaire to record the number and type of injury they have sustained. After the collection of proprioceptive and injury data, the investigators will determine the correlation, if any, between level of proprioceptive ability and prevalence of injury. Conclusions: With this knowledge, the investigators will be better able to determine if proprioceptive training might be beneficial for athletes in order to reduce injury risk in their respective sport.

2019 Fall Academic Showcase Presentations

Student: Yates, Morgan

Major: Biology

Faculty Mentor: Dr. Brittany Gasper

Presentation Type: Oral

Presentation Time: 7:40-8:00

Room: Christoverson 209

Title: Antibiotic Properties and Classification of Chromobacterium

Abstract: Antibiotic resistance is an increasing problem throughout the world. The increased use of antimicrobial and antibacterial products on a day-to-day basis has allowed for more prevalent growth of resistant organisms. It has become necessary to find new antibiotics to deal with these more resistant bacteria. The source of most antibiotics is other microorganisms including bacteria and fungi that compete with these organisms in natural environments with many of our current antibiotics originating from soil microorganisms. In order to increase the chance of finding new microorganisms, soil samples should be taken from unique environments. Soil samples were previously isolated from fertile tropical rainforest soil of Volcanoes National Park on the big island of Hawaii. An antibiotic-producing organism of the Genus Chromobacterium was isolated. This research project will focus on the extensive characterization and possible species identification of this organism through fatty acid methyl ester (FAME) analysis, biochemical characterization, and a thorough sequencing of multiple housekeeping genes.

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