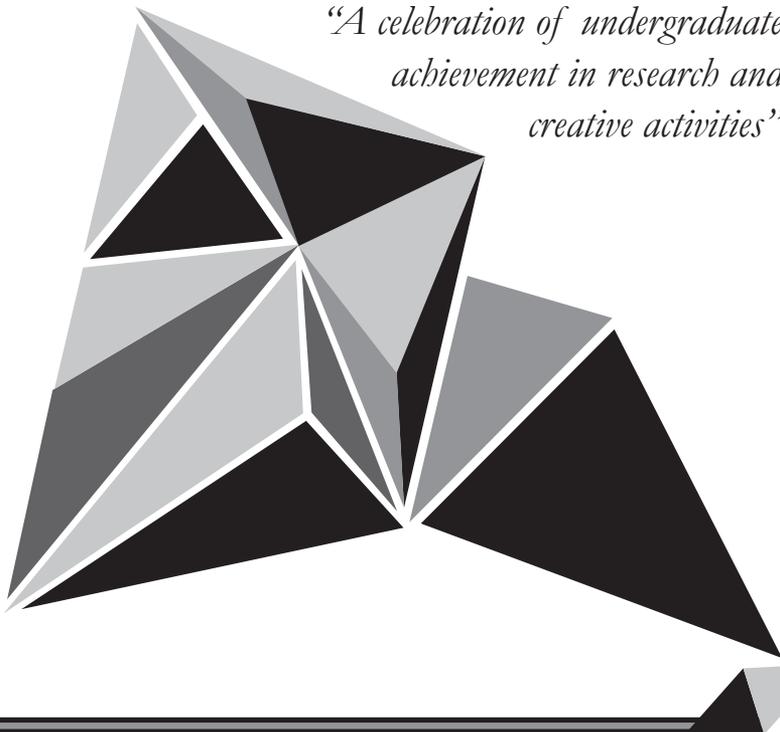


# Spring Symposium

**Wednesday, May 18, 2016  
Eastern Oregon University  
presents the Seventeenth Annual  
Spring Symposium**

*“A celebration of undergraduate  
achievement in research and  
creative activities”*





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UNIVERSITY

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Sharing the Learning

# Spring Symposium 2016

## Events Schedule



### Wednesday, May 18, 2016

**Please see pages 2 through 28 for extended descriptions and presenters of each session**

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#### Wednesday, May 18

8:00 – 8:50 a.m.	Participant Registration / Refreshments	Loso Lobby
9:00 – 9:55 a.m.	Welcome & Keynote Presentation	McKenzie Theatre
	> Dr. Kelly Rice, Chair	
	> Tom Insko, President of Eastern Oregon University	
	> Keynote Presentation	
10:00 – 1:55 p.m.	Panel Presentations	(see detail)
10:00 – 1:55 p.m.	Talks and Remote Presentations	(see detail)
10:00 – 1:55 p.m.	Posters Displayed	(see detail)

This year’s event again includes high school junior and senior exhibitors. An invitation to participate was accepted for poster presentations of research by students from Pendleton High School, Umatilla High School, McLoughlin High School (Milton-Freewater) and Vale High School. These four schools are participating in Oregon Teacher Pathways in collaboration with EOU’s College of Education. Their projects will be displayed in Hoke 339 and we welcome these students, their faculty and families to Spring Symposium 2016 at Eastern Oregon University.

The abstract descriptions and titles on the following pages are as submitted by the presenters and sponsoring faculty. Many thanks to our faculty sponsors: Colin Andrew, Karen Antell, Le Bailey, Marianna Baykina, Anna Cavinato, Joe Corsini, April Curtis, Darren Dutto, Rebecca Hartman, Colby Heideman, Nicole Howard, Ron Kelley, Nancy Knowles, Peter Maille, Scott McConnell, Cory Peeke, Kyle Pfaffenbach, Rosemary Powers, Kelly Rice, Jeremy Riggle, Kevin Roy, Brian Sather, Michael Sell, James Stolen, Steve Tanner, DeAnna Timmermann, Anthony Tovar, Jodi Varon and Amy Yielding.

# Keynote

## **Micaela RILEY**

Title of Project: The Effects of Resisted-Aquatic Exercise on Proprioception, Balance and Fall Prevention in Females aged 58-72 years Old

Keynote Presentation: 9:10 a.m. – 9:30 a.m.

Location: McKenzie Theatre, Loso Hall

Also Presenting: 1:00 p.m. - 1:50 p.m.; Poster Presentation in Pierce Library

*Faculty Sponsor: Kyle Pfaffenbach*

**Abstract:** Background: Research suggests that as females age the risk for falls increase. Recently, there has been a rise in fall risk within females aged 58-72 years old. Females within this age range are considered to be the most common people to experience falls. Falling can cause detrimental effects such as hip fractures, decreased mobility, and shorten a female's lifespan. Purpose Statement: The purpose of this study is examine the effects of resisted-aquatic exercise in older female adults aged 58-72 years old. Methods: Ten females aged 58-72 years old participated in a randomized-controlled study with two experimental conditions, one where subjects performed baseline functional testing and participated in resisted aquatic exercise for one hour; and one control where the subjects performed baseline functional testing and sitting for one hour. We measured functional abilities for each subject under each condition.

## **Travis LOWE and Sydney NELSON**

Title of Project: Applying a Multilinear Regression Model to Predict Air Quality in Burns, Oregon

Keynote Presentation: 9:35 a.m. – 9:55 a.m.

Location: McKenzie Theatre, Loso Hall

Also Presenting: 10:30 a.m. - 10:55 a.m.; Talk in Badgley Hall 144

*Faculty Sponsor: Amy Yielding*

**Abstract:** The City of Burns, Oregon has a serious air quality issue. The city frequently experiences very high levels of PM<sub>2.5</sub>. PM<sub>2.5</sub> consists of a variety of particulates whose size is less than 2.5 micrometers. Such particulates can be inhaled and generally accumulate in the lungs of humans, displaying a strong positive correlation with the instance of lung cancers. Field burning and wood burning for heat combined with the unique atmospheric conditions in Burns appear to be contributing to these high levels. In this talk we discuss the methods used in establishing a regression model to predict PM<sub>2.5</sub> for Burns. In particular, we worked in collaboration with the National Oceanic and Atmospheric Administration (NOAA) as well as the Oregon Department of Environmental Quality (ODEQ), who had established a preliminary regression equation. Improvements we made to this model were adding interaction terms and including data gathered from the previous day. The resulting equation improved the predictions of PM<sub>2.5</sub> by a 10% higher R-squared adjusted and displayed a narrower range of errors. Our model is now implemented as part of a pilot air quality alert system for the City of Burns sent out by ODEQ in collaboration with NOAA.

# Presentations

## **Shelby BAERTSCH with Misa Gonzalez**

Title of Project: Benefits of Physical Activity and Sports in Softball

Type of Presentation: Poster Presentation

Others assisting with research: Stephanie Upshaw, EOU softball team

Location: Zabel 2nd Floor

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** Athletics has been scientifically proven, both physically, socially, and psychologically. "The Miracle," is a one-day event for local disabled athletes to get a chance at playing a game of softball. Also, the Eastern Oregon Softball Camp was a two-day event for the local softball players to get a full interaction with both the player and coaches of the Eastern Oregon University softball team. Purpose: To show the benefits of athletic amongst non-disabled and disabled athletes through softball. Methods: A handout survey given to the athletes after the day activities. Results: The questionnaires proved that the athletes had positive responses to softball. The campers that attended, 44.4% were between the ages 13-18 and 55.56% were 8-13 years old. 88.89% of the campers had played softball competitively. 100% of the campers enjoyed the hitting drills. 55.56% enjoyed infield drills, while 22.2% enjoyed outfield drills. Reasons for why campers attended the camp, 88.89% said they wanted to develop skills, 66.67% said they wanted to experience what EOU softball was all about, and 22.2% chose the "other" option. 100% of the campers both said they would attend this camp again and would continue playing softball. Using Likert Scale from 1 to 5, 5 being excellent and 1 being bad. The questions how was the camp and how the campers felt about the leaders had a mean of 4.778+.441 for both. The last question, how do you feel about being in the gym, produced a mean of 4.444+0.527. Conclusion: The results of this tests do indicate that softball can affect an athlete physical, socially, and psychologically. However, the results aren't incorporating the different coaching styles seen in the game, which can alter the results.

## **Jeremy BARD with Zach Nilsson, Katie Hamann, Crystal Mitchell**

Title of Project: Distal Heme Coordination in Ferric Cytochrome c'

Type of Presentation: Poster Presentation

Others assisting with research: Brian Mandella

Location: Loso Lobby

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Colin Andrew*

Jeremy Bard is a member of Phi Kappa Phi Honor Society.

**Abstract:** Proteins with heme cofactors perform a variety of functions, e.g. small molecule binding, which are controlled by the redox properties and chemical environments of their Fe centers. Cytochromes c' are a class of bacterial heme proteins that bind nitric oxide (NO) and may protect bacteria from nitrosative stress. In the case of *Alcaligenes xylooxidans* cytochrome c' (AXCP), access to the empty distal Fe site is hindered by the bulky hydrophobic Leu16 residue (Fig. 1). Native AXCP is relatively unreactive towards NO in its Fe(III) state, requiring several hours for completion. By mutating Leu16 to the smaller Gly residue, we investigated the influence of the distal steric environment on AXCP Fe(III) heme coordination using spectroscopic and kinetic techniques. Unlike native AXCP, which has an empty distal Fe(III) site, we show that the L16G variant has a distal water ligand which significantly affects Fe(III) NO binding properties.

## **Jeremy BARD with Zach Nilsson, McKenzie Garlock**

Title of Project: Mathematical Modeling of Heat Through a Hot Bath

Type of Presentation: Poster Presentation

Location: Simmons Gallery

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Anthony Tovar*

Jeremy Bard is a member of Phi Kappa Phi Honor Society.

**Abstract:** Research was done towards modeling heat dispersion through a bath tub full of water. Differential equations were used to model this dispersion using a lumped system analysis on the water in the tub. The heat source in the system was the hot water faucet at the end of the tub. Efforts were made to include the effects of mixing the water, varying the shape of the tub, and adding bubble bath solution.

### **Jeremy BARD**

Title of Project: Development of Experimental Flow Chemistry Techniques

Type of Presentation: Poster Presentation

Others assisting with research: Zach Nilsson, Darcy Morales

Location: Pierce Library

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Ronald Kelley*

Jeremy Bard is a member of Phi Kappa Phi Honor Society.

**Abstract:** Flow Chemistry is a field of chemistry that has major implications in the industrial setting, as using flow Chemistry instead of batch Chemistry at a production level has the potential to increase the rate of reactivity and the yields of the reactions. Knowledge of flow Chemistry theory and techniques is crucial to any undergraduate student planning to go into Chemical Engineering or industrial Chemistry. Unfortunately, many institutions neglect to discuss this subject in their curriculum, which could be due to the inherent cost of the equipment. Because of this, research has been done towards developing an inexpensive and easily-accessible set up that universities can implement in their laboratories. Syringe pumps are commonly used in laboratory scale experiments, and are one of the less expensive choices to consider when interested in flow Chemistry. For smaller schools, however, they may still be too expensive. Glassware and compressed gasses are far less expensive, and all universities have access to them, so methods of flow chemistry testing using only these materials would be ideal for any institution interested in flow chemistry. This research first used syringe pumps as a method to which other novel testing methods are compared to.

### **Caitlynn BARTON (See abstract under Darcy MORALES)**

### **Ryan BLANCHARD with Dean Ricker, Mico Murphy**

Title of Project: Kryptos Challenge

Type of Presentation: Poster Presentation

Location: Simmons Gallery

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Steve Tanner*

**Abstract:** Kryptos, a contest held by Central Washington University, tests the code-breaking skills of teams of up to three undergraduate students. The teams are given four days to decrypt three messages using clues hidden in the code and the associated story. The contest this year was held from April 7th to April 11th. Our team consisting of Ryan Blanchard, Mico Murphy and Dean Ricker placed 6th out of 92 total participating teams and completed the three challenges in less than 24 hours. This poster will present our solutions to each of the three challenges.

## **Angela BONNER**

Title of Project: Plate Testing Techniques for Cannabis resin

Type of Presentation: Poster Presentation

Location: Loso Lobby

Others assisting with research: Joe Corsini

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Joe Corsini*

**Abstract:** With the recent legalization of marijuana, standard testing procedures must be developed to ensure the safety of the public. It is currently required that Cannabis be tested for various bacterial and fungal contaminants. Cannabis products vary in form, some of which can complicate microbial testing procedures. Resin extracts in particular have a sticky, viscous texture that prevents distribution on agar plate. The purpose of the experiments herein was to develop a technique for suspending Cannabis resin in a form conducive to plate testing methodologies. The bacterial and fungal specimens were, respectively, *Escherichia coli* and *Saccharomyces cerevisiae*. The basic approach involved preparation of a cell suspension containing nutrient broth and one of the organisms followed by the addition of 50 mL of canola oil or 50 mL of nutrient broth, followed in turn by vortexing and plating onto Nutrient Agar. The results of a number of experiments suggest that the canola oil does not reduce viability of either *S. cerevisiae* or *E. Coli*. Thus, this method can be used for microbial testing of Cannabis resins.

## **Ty BOWEN**

Title of Project: The Russo-Japanese War and Why it Should be Taught

Type of Presentation: Talk

Location: Zabel Hall 202

Presentation Time: 1:00 p.m. - 1:25 p.m.

*Faculty Sponsor: Nicole Howard*

**Abstract:** My capstone is a historiographic and pedagogic study of the Russo-Japanese War, which took place from 1904-1905. I begin with a survey of the various historians who have been important in the study of this conflict, from Asakawa Kan'ichi's 1904 study of the war's outbreak to Naoko Shimazu's 2009 monograph, *Japanese Society at War: Death, Memory and the Russo-Japanese War*. Following this historiographic survey, I offer a prospectus for teaching this conflict to secondary and undergraduate students. In a teaching module built for a week-long series of lectures and assignments, I present a summary of the war's origins, consider the economic, political and social causes at play, evaluate diplomatic alliances, and then contextualize the war's conclusion with the Portsmouth Treaty. Central to the pedagogic approach I take is the U.S. perspective of the war, which varied based on media accounts of the conflict. To that end, I draw on contemporary newspaper reports, principally from the *New York Times*, to build a curriculum that allows students a window into American attitudes about this distant, but remarkably important, war.

## **Charlotte BOWERS**

Title of Project: "A Most Beautiful Form:" Genderless Ideals in Aesthetic Fashion and Design

Type of Presentation: Talk

Location: Zabel Hall 201

Presentation Time: 11:00 a.m. - 11:25 a.m.

*Faculty Sponsor: Nicole Howard*

**Abstract:** Like all fashion, Aesthetic dress was not merely clothing. It was an integral part of the Aesthetic movement's artistic discourse, and aspired to a single standard of taste that determined what was beautiful without privileging gender. In an era that is often defined by the separate spheres doctrine, both art and dress demonstrate that Aesthetic design sought to eliminate difference in the performance and depiction of femininity and masculinity in the

decorative arts. In Aesthetic culture, design and costume did not belong exclusively to the feminine private sphere, but were instead practiced by both men and women and afforded the same high art status as more traditional mediums. Where mainstream Victorian culture subordinated the feminine, the Aesthetes adopted and evolved it, severing the link between feminine beauty and virtue and embracing the “aesthetic of the ugly.” Aesthetic dress drew much of its inspiration from the sexless drapery of classical and medieval clothing, and wearers were frequently mocked in the popular and critical press. I argue that in their pursuit of a mode that embodied objective beauty, Aesthetes practiced an artistic androgyny that simultaneously disgusted and intrigued Victorian British society.

**Hannah BRANDSMA (See abstract under Candi Nielsen)**

**Nancy BRUCH**

Title of Project: Environmental History of Celilo Falls and The Dalles Dam

Type of Presentation: Talk

Location: Badgley Hall 146

Presentation Time: 12:00 p.m. - 12:25 p.m.

*Faculty Sponsor: Nicole Howard*

**Abstract:** This paper explores the environmental history of dam building, and why dams were important in mid-century America, specifically focusing on The Dalles Dam and the changes it brought to the landscape of the mid-Columbia River. It provides reasons for sacrificing Celilo Falls in favor of economic and political gains, why the dam was built, how the land and the river were physically altered, and how human culture was changed by the new environment. Reasons for the dam included production of hydro-electric power as well as flood control, employment and national security. The dam was built post-World War II, when the Cold War and New Deal politics impacted such decisions. Damming the Columbia at The Dalles affected the physical environment, and humans' interaction with the landscape. The political machinations which drove the project forward and the economic benefits that were expected to result are discussed, along with the effects of the dam on wildlife, plant life, and people. Finally, an historical look backward over the last 60 years shows what has been learned and how human life has changed with the changing of the environment.

**Charlette BURGHARD (See James BURKLUND)**

**James BURKLUND with Charlette Burghard, Luke Guerin, Colton Dunham, Michael Hillman**

Title of Project: Structural Elucidation of Novel Pyrrolizidine Alkaloids from *Omphalodes aliena*

Type of Presentation: Poster Presentation

Location: Loso Lobby

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Ronald Kelley*

**Abstract:** Pyrrolizidine alkaloids (PA's) are potentially toxic, naturally occurring secondary products typically found in the plant family Boraginaceae. As part of a continuing alkaloid analysis of the Boraginaceae, *Omphalodes aliena* was collected from Texas and analyzed to establish a GC-MS PA profile. Preliminary findings indicated the presence of eight different retronecine-based type PA's: the major compounds matching or isomeric with the known monoester intermedine, *m/z* 299, the open diester echiumine, *m/z* 381, and their respective 3'-acetylated derivatives (Figure 1). Five previously examined Eurasian species of *Omphalodes* have displayed a diverse array of PA structures, especially in regards to the pyrrolizidine core. This is the first reported PA analysis of a North American representative of this widespread genus.

**Matthew CHATHAM**

Title of Project: Game Theory: How to Win at Golf

Type of Presentation: Talk

Location: Zabel Hall 256

Presentation Time: 11:00 a.m. - 11:25 a.m.

*Faculty Sponsor: Amy Yielding*

**Abstract:** Golf is a turn-based card game with a memory component, not unlike the Poker variant Texas Hold 'Em. Over the course of nine rounds, players attempt to minimize their score relative to opponents by exchanging cards of either known or unknown value with one of their cards in hand. When a player feels that their score is "low enough," they can knock to end the round after each remaining player has taken a final turn. Using tools of game theory, I analyze a simplified version of Golf and present results on its game tree and optimal strategy. This talk is given in partial fulfillment of my BA in Mathematics.

**Adonis CHAVARIN**

Title of Project: My Internship at the Center for Student Involvement

Type of Presentation: Talk

Others assisting with research: Matthew Chatham

Location: Zabel Hall 201

Presentation Time: 1:00 p.m. - 1:25 p.m.

*Faculty Sponsor: Le Bailey*

**Abstract:** This presentation is a reflection on what I have accomplished, learned, observed, and encountered as the Research Analyst Intern position for the center of student involvement at Eastern Oregon University. The research I have engaged in during my time as the Research Analyst intern is the topic I will be discussing during this presentation. There will also be discussions about the methods in which I went about my research including the projects I carried out over the course of the winter and spring terms on student involvement. The research that I completed includes; collecting, analyzing, coding, and summarizing data. All my research is based out of different information systems. As a research analyst intern I have adopted different perspectives in regards to student involvement. Some of the perspectives include; a student athlete, a business student, and a student working for the center of student involvement. It has been a privilege and a challenge to work alongside an array of departments throughout the university. Throughout my time as a research analyst intern, I have discovered the value chain in the relationship between the university and the student body in a holistic manner.

**Jake CLEVERLEY with Carly Valadez**

Title of Project: Modern Day Education

Type of Presentation: Panel Presentation

Location: Badgley Hall 148

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Nancy Knowles*

**Abstract:** This panel will discuss a more modern view of education: from defining what "The Genius" means to getting boys involved in reading. Carly will start the panel out by discussing a survey she conducted with students grades 6-12 and their understanding of canon literature. After that, Jake will discuss his survey he conducted with the professors at Eastern Oregon University and the demands of reading in college and beyond. After they have showcased the need for reading, Carly will discuss ways in which she found that reading grows the Genius. Jake will then introduce some ways that he has found to help boys get more involved in reading. At the end of the presentation there will be time for a Q and A.

**Ella CLOW (See abstract under Katie HARRIS)**

**Roszanne CORNFORD (See Candi Nielsen)**

**Fallon CRAIG (See abstract under Donnie LATER)**

**Victoria DAVIS (Donnie LATER)**

**Logan DEROIN**

Title of Project: Effects of Passive vs Active Recovery during a simulated Football Game

Type of Presentation: Poster Presentation

Others assisting with research: Zander Miles

Location: Zabel 2nd Floor

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Kyle Pfaffenbach*

**Abstract:** It is common practice for American football players to sit on the bench or remain stationary when they are not in the game. Research suggests that exercising at low intensity (active recovery) in between periods of completion may help clear blood lactate that causes muscle failure and prolong fatigue. Currently, little to no research has examined the effects of active recovery on American football athletes. The purpose of this study was to examine the effects of active recovery on performance in collegiate American football athletes. Eleven collegiate football players participated in a blind-randomized controlled study with two experimental conditions, one where subjects performed active recovery in between simulated football drives and one where they sat on a bench or stood. We set up a simulated football game with 6 drives of 5 specified agility drills each. Power outputs and blood lactate levels were measured before, after the 3rd drive, and after the 6th drive.

**Kaeliana DEVERA with Justin Fuller, Emily Elsner, Cheyanne Molt**

Title of Project: GO- ASAP

Type of Presentation: Poster Presentation

Others assisting with research: Kelly Rice

Location: Simmons Gallery

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** A pilot study program to promote and increase physical activity and healthy lifestyles to middle school aged kids. Introduction: The purpose of this program was to increase physical activity (PA) and reduce health risk behaviors. Healthy eating habits are just as important as PA in a healthy lifestyle. By offering an after school outdoor program called the Get Outside-After School Activity Program (GO-ASAP) we were able to increase knowledge of healthy eating habits. Methods: GO-ASAP is a 20-week program taught through short lectures and outdoor activities. Knowledge of healthy eating habits were measured through a Healthy Teens survey. Participants completed a survey once at the first week of the program. Short lectures about healthy eating habits were taught once a week. On the 10th week the same Healthy Teens survey was given. Qualitative method was measured by feedback from the healthy snacks given to them twice a week during the program. Results: Participates showed a slight increase of making healthier eating choices. Knowledge of healthy eating habits increased based on the averages of survey scores. Over 50% Healthy Teens survey questions showed an increase of averages. Questions that asked the participates about choosing vegetables in the past seven days showed a 19% increase. Questions that asked about healthy beverage choices had an increase of 2.215 on a scoring scale of 1-7. Conclusion: An increase of knowledge of healthy eating habits was shown through the Healthy Teens survey.

This program could further increase in PA and reduce health risk behaviors.

**Samuel DeVORE**

Title of Project: Cannabinoid Therapy: A Clinical Perspective

Type of Presentation: Poster Presentation

Others assisting with research: Jeremy Riggle

Location: Loso Lobby

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Jeremy Riggle*

**Abstract:** Accurate information on the potential health benefits and associated risks of cannabinoid therapy are often hard to find and confusing. This poster utilizes the most current peer-reviewed research articles from clinical-based cannabis studies carried out in the US and abroad in an attempt to synthesize this information. In addition, other important chemical compounds present within cannabis, their synergistic effects, and how they interact with cells in the human body will be presented. Finally, the current attempt by the state of Oregon to establish a cannabinoid research institute will briefly be discussed including logistical and federal constraints. The objective is to provide accurate and current information to the public and to dispel misinformation on the topic of cannabis for medical use.

**Colton DUNHAM (See abstract under James BURKLUND)**

**Emily ELSNER (See abstract under Kaeliana DEVERA)**

**Emily ELSNER**

Title of Project: Get Outside-After School Activity Program

Type of Presentation: Poster Presentation

Others assisting with research: Justin Fuller, Cheyenne Molt, Kat Devera

Location: Simmons Gallery

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** Introduction: Spending time outdoors and physical activity are essential for adolescent health. The purpose of this study was to utilize the area's resources by implementing an outdoor activity after school program and increase physical activity. Methods: Get Outside – After School Activity Program is a 20 week (2 X wk/150-180 mins) program with the goal of increasing physical activity in adolescents in La Grande Oregon. Subjects recruited from a local middle school. Assessments of physical activity were taken using the Physical Activity Questionnaire for Children (PAQ-C) (Kowalski et.al.). Descriptive statistics were calculated. Results: Subjects (male = 10, female = 7) were 12.9 + .9 years old. Mean ± SD for physical activity constructs were: Participation in physical activities (Soccer, basketball, running, walking, biking etc.) (1.49 ± 0.63), frequency during the week of physical activity (2.44 ± 1.16), and overall physical activity score (2.34 ± 0.89). In post test it was found that overall physical activity increased (2.09-2.34) but had no statistical significance (p=0.401). Conclusion: Because this is a pilot study there are still factors to consider in the study. Small sample size may be to blame for inconclusive evidence of change.

**Kory ESCOBAR with Ronald King**

Title of Project: Test Performance: Effects of Time Pressure and Authority Presence

Others assisting with research: Marianna Baykina

Type of Presentation: Poster Presentation

Location: Loso Lobby

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Marianna Baykina*

**Abstract:** Ever since the results of Milgram's study of obedience to authority were published, the effects of authority figures on subjects have fascinated people. This experiment looked at participants' test performances with and without the presence of perceived time pressure (a loud ticking clock) and with or without the presence of an "authority figure." Our hypothesis was that the presence of time pressure and the authority figure would cause students to complete the test at a faster rate, but miss more questions on the test compared to participants in an empty testing room. The results showed no significant differences in test scores, but participants taking the test with the authority figure present completed the test at a significantly faster rate than those who took the test in an empty room. Taking the test with the ticking clock in the room actually increased test completion time.

### **Johnny FULFER**

Title of Project: Power, House-Money, and Expected Value: The Role of Expectations in Minsky's Financial Instability Hypothesis.

Type of Presentation: Panel Presentation

Location: Loso Hall 117

Presentation Time: 1:00 p.m. - 1:50 p.m.

*Faculty Sponsor: Scott McConnell*

**Abstract:** The onset of behavioral economics has introduced a new framework for economic analysis that can be used to view economic actors as complex and unique, with the ability to make errors in their decisions. Furthermore, literature on behavioral economics has provided evidence that suggests people do not calculate risk with complete accuracy. The house money effect as well as the sense of power are the primary behavioral biases I will explore in this study. People make errors when making decisions after prior gains and under the influence of the sense of power, which can influence the way they perceive future gains. In an effort to explore the influence of the sense of power on the house money effect, 60 experimental participants will be tested. The role of expectations was central in Hyman Minsky's financial instability hypothesis. I will discuss the role of human behavior in Minsky's framework in order to shed light on the microfoundations of the business cycle.

**Justin FULLER (See abstract under Kaeliana DEVERA)**

**Devon GALISZEWSKI (See abstract under Donnie LATER)**

**McKenzie GARLOCK (See abstract under Jeremy BARD)**

### **McKenzie GARLOCK**

Title of Project: Peg Solitaire: The Math Behind the Cross Board

Type of Presentation: Poster Presentation

Location: Zabel 2nd Floor

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Amy Yielding*

**Abstract:** Come learn about the math behind the game of peg solitaire. This presentation depicts some of the theorems and strategies behind cross peg solitaire. Learn the fastest way to lose a game as well as ways to trick someone into a losing game every time. This presentation includes research about various theorems that outline the significance of phase relations and parities of pegs for the cross peg solitaire game.

**Misa GONZALEZ (See abstract under Shelby BAERTSCH)**

**Denise GRAVENER (See abstract under Donnie LATER)**

**Jessica GRIFFIN-CONNER**

Title of Project: Tin Men: The Evolution of the Android in Popular Culture

Type of Presentation: Talk

Location: Zabel Hall 201

Presentation Time: 10:00 a.m. - 10:25 a.m.

*Faculty Sponsor: Rebecca Hartman*

**Abstract:** When we hear the word ‘android,’ most of us think of something modern or futuristic, grounded firmly in the realms of science-fiction. In truth, androids have been with us long before the modern age, and they predate the invention of science fiction by millennia. My project examines the ways in which Androids have been used in literature in three historical eras to represent humankind’s relationship to technology. Drawing upon both literary analysis and historical methodologies, my paper examines three characters, Talus the Iron Man from Edmund Spenser’s epic Elizabethan poem on the virtues, “The Faerie Queene,” the Tin Woodman from L. Frank Baum’s turn of the twentieth century “Oz” books, and Maria the brass Maschinenmensch from Fritz Lang’s 1927 film “Metropolis,” to explore the evolution of the conceit of the android in literature across several centuries, and to explore the question of humankind’s relationship to technology.

**Rikki GRIFFIN (See abstract under Candie NIELSEN)**

**Luke GUERIN (See abstract under James BURKLUND)**

**Kathryn HAMANN (See abstract under Jeremy BARD)**

**Theresa HAMMAN with Haley Hill, Connor Stone, Christopher Odai, Samantha O’Conner, Jessica McKim**

Title of Project: The Creative Process: Oregon East 2016

Type of Presentation: Panel Presentation

Location: Loso Hall 117

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Jodi Varon*

**Abstract:** Oregon East is EOU’s student run and student funded literary and arts journal. Our panel presentation is a preview of the 2016 edition of the magazine spotlighting EOU’s amazing student writers and artists! Students will read from their prose and poetry pieces or discuss their works of art accepted for publication. Students will also describe the creative process from their first idea to final piece. There will be a Q & A session after the presentations.

**Brittany HARGROVE**

Title of Project: Event Planning for a Major Speaking Event

Type of Presentation: Talk

Others assisting with research: April Curtis, Mike Burton, Doran Hopkins

Location: Zabel Hall 202

Presentation Time: 10:00 a.m. - 10:25 a.m.

*Faculty Sponsor: April Curtis*

**Abstract:** In this presentation, I will share my experiences in the chaotic, exciting, and rewarding world of event planning. I will do this by tracing my work throughout my project, “Event Planning for a Major Speaking Engagement,” which culminated in a free community event at Eastern Oregon University on May 3, 2016 with national radio host, Lars Larson. I will recount

and analyze my trials and triumphs in the various stages of event planning, including convincing Lars Larson to speak at EOU, securing an event venue, recruiting event sponsors and supporters, advertising the event and designing marketing materials, dealing with community members with opposing political ideologies, and much more. I will ultimately argue that the old adage is true when it comes to event planning—success really does lie “in the details.” I will also use my experience to provide tips to those who are interested in executing a similar speaking engagement in the future.

**Katie HARRIS with Ella A. Clow**

Title of Project: Selection of protein-binding DNA aptamers for bacterial detection in salmon

Type of Presentation: Poster Presentation

Others assisting with research: Jessica Clements, Dr. Anna Cavinato

Location: Simmons Gallery

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Anna Cavinato*

**Abstract:** This study describes ongoing efforts to identify and isolate specific DNA aptamers that bind to p57 also known as Major Soluble Antigen (MSA), the principal antigenic protein found on the cells of the Rs bacterium, responsible for causing bacterial kidney disease (BKD) in salmonids. A 80-mer with a 40 bp random region was used. Six sub constructs were constructed from the MSA protein based on three selected regions. Aptamers were identified from a very large, random pool through a process called Systematic Evolution of Ligands by EXponential amplification (SELEX). SELEX was performed on the R2c sub construct from region 2 which contains a putative DNA-binding domain and therefore is believed to be a good binding site for aptamers. Prior to each round of SELEX, ssDNA was isolated by reacting the biotin-labeled dsDNA with streptavidin coated sepharose beads. The separation is made possible by the fact that biotin binds strongly to streptavidin. The ssDNA was recovered by denaturing the biotinylated dsDNA with sodium hydroxide. Once isolated and characterized by DNA sequencing, aptamers will be used in binding assays to identify those with the highest affinity to R2c binding site with the purpose of developing a biosensor for Rs detection in water.

**Elizabeth HARRY**

Title of Project: The relationship between angle of landing on ground reaction force and knee control

Type of Presentation: Poster Presentation

Others assisting with research: Baylee Shelton

Location: Loso Lobby

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Darren Dutto*

**Abstract:** Research has shown that compared to males, females are more prone to knee injuries, specifically those involving the ACL. These injuries most often occur during non-contact movements such as rapid changes in direction, or landings performed incorrectly. The purpose of this study was to look at the effect that different angles of landing have on knee mechanics. Fourteen regularly active female college students between the ages of 18 and 24 participated in this study. Participants were asked to complete landings at three different angles (low, moderate and vertical) and each jump was recorded in the sagittal plane using a high speed camera (240 fps). Landing data were collected using a platform to measure ground reaction force, specifically in the vertical and sagittal planes.

## **Rebecca HICKOX**

Title of Project: Newtonianism at a Glance: A Look into the Evolution of Newtonian Thought – Theism to Atheism

Type of Presentation: Talk

Location: Badgley Hall 144

Presentation Time: 1:00 p.m. - 1:25 p.m.

*Faculty Sponsor: Nicole Howard*

Rebecca Hickox is a member of Phi Kappa Phi Honor Society.

**Abstract:** As the natural philosophers of the Enlightenment engaged in scientific discovery, their views of religion and the divine shifted. With their growing knowledge, these philosophers began to either challenge previous conventions of religious belief or use this knowledge to strengthen their faith in religious belief. Historians have highlighted this division in prior publications; however, further exploration remains relevant due to the ongoing nature of the religion versus science debate. For this project, I will examine four significant natural philosophers from the European Enlightenment movement to identify how their theological and religious beliefs were impacted by scientific discoveries. Baruch Spinoza, David Hume, John Locke, and Voltaire were selected for examination based on their interesting progressions of religious thought. In addition to their own unique qualities, these four philosophers also share the common thread of being influenced by Newtonianism. Given that Newtonian thought played a role as catalyst for the Enlightenment philosophy, an overview of Newtonianism will provide opening context for this project prior to a detailed exploration of the evolution of thought from the other four philosophers. Final conclusions will focus on the differences and similarities between each philosopher and brief analysis of how this content can be extrapolated to the present day.

## **Haley HILL with Christopher Odai**

Title of Project: Lone Warriors: Stories of Grief and Loss

Type of Presentation: Panel Presentation

Location: Loso Hall 117

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Nancy Knowles*

**Abstract:** In life, everybody experiences some kind of emotional distress, whether it be anxiety, loss or depression. Sometimes they don't want to share these moments from their lives, because they feel unable to express their pain. Through creative nonfiction, we provide an inside look of the emotional effects and inspire those who think they are fighting alone. Ranging from war's cruel hands, emotional abuse or the loss of a loved one, this presentation will share the journey of grief and loss as told through the use of personal accounts, poetry and song.

## **Haley HILL (See abstract under Theresa HAMMAN)**

## **Denica HILL**

Title of Project: Dispositional and Situational Factors Effect on Moral Behaviors

Type of Presentation: Talk

Location: Badgley Hall 148

Presentation Time: 11:00 a.m. - 11:25 a.m.

*Faculty Sponsor: DeAnna Timmermann*

**Abstract:** The relationship between situational and dispositional factors and moral decision making was examined. Eighty-four students, 23 males and 62 females, ages 18-58 years, answered moral questions in either a heightened identity, a deindividualized, or a control condition. Deindividualization was predicted to increase amoral behavior, while heightened

identity was predicted to increase moral behavior. Kohlberg's stages of moral development were used to predict preconventional participants would answer more morally and be less influenced by situational factors, while postconventional participants would answer more amorally and be influenced more by situational factors. There was no significant effect of group on moral decisions. However when asked a question which simulated an authoritative position and placement of guilt, preconventional participants were significantly less likely to kill a prisoner for utilitarian reasons. Deindividuated conventional participants unanimously were more likely than the conventional control group to kill the prisoner. There was also a significant difference in gender; males overall were more likely to kill a person for utilitarian reason than females. Males were also more likely to kill than females on all questions analyzed, except for the authoritarian position and placement of guilt question, on which females were just as likely as males to kill the prisoner.

**Michael HILLMAN** (See abstract under Darcy MORALES)

**Michael HILLMAN** (See abstract under James BURKLUND)

**Erica HITZMAN** (See abstract under Donnie LATER)

**Katherine HOOD**

Title of Project: 2015 Survey of Mosquitoes of the Ladd Marsh Wildlife Area, Union County, Oregon

Type of Presentation: Poster Presentation

Others assisting with research: Karen Antell, John Rinehart

Location: Zabel 2nd Floor

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Karen Antell*

**Abstract:** The Ladd Marsh Wildlife Area (LMWA), managed by Oregon Department of Fish and Wildlife, consists of 6,000 acres of native and restored wetlands at the south end of the Grande Ronde Valley in NE Oregon. Wetland enhancement projects on the marsh utilize wastewater from the city of La Grande. West Nile Virus is resident among local and migratory bird populations in the Grande Ronde Valley. In summer, 2015, we conducted a survey of mosquito populations on the LMWA in order to ascertain if restored wetlands pose an increased threat of public exposure to West Nile Virus. In 60 trap samples, we collected a total of 1,038 mosquitoes among fourteen different species. Over 50% of all mosquitoes trapped were collected at a single site adjacent to irrigated farm fields, and species diversity also was highest at this location. Eight known potential West Nile vector species were found at most sample locations and these species comprised 96.2 % of all mosquitoes caught. West Nile vector species were not detected in larger abundance in locations adjacent to wastewater ponds than in native wetlands. Healthy populations of predators on both larval and adult life cycle stages may keep mosquito populations on Ladd Marsh wetlands in check. We conclude that Ladd Marsh does not contribute substantially to risk of West Nile transmission, as compared to risks associated with mosquito populations emerging from surrounding irrigated fields.

**Ryan HUNT** (See abstract under Donovan SPIKERMAN)

**Taylor HUNT**

Title of Project: Digital Photography and Copying

Type of Presentation: Talk

Location: Zabel Hall 201

Presentation Time: 12:00 p.m. - 12:25 p.m.

*Faculty Sponsor: Michael Sell*

**Abstract:** Over the years, artists and the techniques they used to make art have evolved, but not all of these changes have been for the better. As an art minor taking Digital Photography I explored the advantages and disadvantages to creating photographs using digital techniques. One of the interesting things I came across was that I saw more and more artists manipulating someone else's work and creating a new photograph. Many artists were doing this to create interesting photos, however there was a thin line between creating a new piece of art and copying other's work. I found many artists that were using digital as a crutch for not being completely original and creative in their photography. Some were doing it to create a narrative, such as Hank Willis Thomas portraying the stereotypes on women in magazine covers over the years. Others copied others work for their own benefit, such as Richard Prince who stripped away the text from a Marlboro ad because he liked the cowboy picture they took. These two artists demonstrate the ease of using digital editing to use other's work and manipulate it and pass it off as their own, regardless if that was the artists intent.

### **Alyssa JOHNSON**

Title of Project: Run Girl Run Program: Impact on Psychological Aspects of Physical Activity/Fitness

Type of Presentation: Poster Presentation

Others assisting with research: Alexandra Whitney, Kaitlin Kennedy, Kelly Rice

Location: Zabel 2nd Floor

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** Introduction: The Run Girl Run program is spent with 4th and 5th graders from Central Elementary. This outdoor program is important for increasing their physical activity and educating them about a healthier lifestyle. Purpose: The purpose of this program, is to increase and educate girls about physical activity, and to evaluate if the program does so. For this project, the purpose will be to evaluate how the girls currently feel about physical activity and their physical fitness. Method: The Run Girl Run program is an 11-week (2 X wk/ 150 mins) project designed to increase physical activity and educate the girls about a healthier lifestyle. Baseline assessment of the girl's sense of their physical activity and physical fitness was measured using a survey. There were 25 girls, out of a total of 27, who participated in the eight question survey. Questions 1, 4, and 6 were graded on a 5 point Likert scale. Questions 2 was graded by number of physical activities enjoyed. Question 3 was graded on the understanding and knowledge of what physical fitness means from 3(understanding), (somewhat understanding), to 1 (no understanding). Questions 5 and 8 were graded using a scale from 1(lowest) to 4(highest). Finally question 7 was graded using a scale from 1(lowest) to 2(highest). The survey was handed out to the girls on 4/5/2016 and took about ten minutes for the girls to fill out. Results: Participants were recruited from Central Elementary School (27 females) with an average of 10.27 years of age. The average score of physical activity was 3.75, outside activities enjoyed by the girls was 3.24, understanding of physical fitness was 1.46, how physically fit the girls felt was 3.8, amount of physical active days spent outside by the girls is 3.5 out of 4, how they felt about their body weight and the average was 3.87, girls who felt they received enough physical activity was 1.92 (95%) and girls who felt they had control over their future health was 3.62 (90.5%). Conclusion: Program will evaluate how the girls currently feel about their physical activity and physical fitness from a pretest and mid-test.

**Sheyenne JOHNSON (See abstract under Donnie LATER)**

**Alannah JONES**

Title of Project: Braid Groups

Type of Presentation: Exhibit

Location: Loso Lobby

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Amy Yielding*

**Abstract:** In this exhibit, we explore the construction of braids, which can be modeled by modern day mathematics. People usually think of braids as numerous strands intertwining, but there is much more behind the scenes. Braids have many mathematical properties, some of which we see in this exhibit. Math is everywhere in this world, and braids are no exception.

**Alannah JONES with Zoe Mathias**

Title of Project: Eastern Oregon Social Science Journal

Type of Presentation: Exhibit

Others assisting with research: Aaron Thornburg, Amy Yielding, Kalia Gentlesnow

Location: Pierce Library

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Amy Yielding*

**Abstract:** The Eastern Oregon Social Science Journal is making its debut at Spring Symposium 2016! Offering publishing opportunities for undergraduate research has always been a great piece of the Science Journal, and we aren't stopping there! The Social Science Journal is now going to alternate every other year with the award-winning Science Journal, allowing a whole new plethora of opportunities for social science undergraduate students to publish their research.

**Kaitlin KENNEDY**

Title of Project: Run Girl Run Program: The measurement and evaluation of physical activity in pre-adolescent girls through an active running program

Type of Presentation: Poster Presentation

Others assisting with research: Alexandra Whitney, Alyssa Johnson, Kelly Rice, Robin Maille

Location: Simmons Gallery

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** Introduction: Identifying cognitive and physical changes in children through this outdoor program can assist in the development of strategies towards sedentary lifestyle prevention and increase positive attitude towards physical activity and self awareness. Reducing risks for obesity, anxiety, and depression. Methods: Run Girl Run is a 10-week (2 X wk/150 mins) program aimed to increase physical activity (PA) and physical fitness in 4th and 5th grade females. A physical activity survey will be given 3x throughout the program; week 1, week 5, and week 9. A timed 400m run will generate a baseline comparison for physical fitness. Each participant's 400m time is recorded and the results will be compared towards the end of the program to measure if the increase in physical activity has affected their overall physical fitness. Results: Currently this program has a total of 26 registered participants ranging in demographics between the ages of 9 and 12 with the average age being 10.24. Part one of the (PA) survey series, a timed 400m lap around the track, and proper running technique have been. Conclusion: This program will evaluate the changes in PA, physical fitness, and attitudes towards physical activities in 4th and 5th grade girls.

## **Tyler KIDO**

Title of Project: Blood of the Kazoku: How the Japanese Internment Deepened the Existing Generational Divide between the Issei and Nisei.

Type of Presentation: Talk

Location: Badgley Hall 146

Presentation Time: 12:30 p.m. - 12:55 p.m.

*Faculty Sponsor: Nicole Howard*

**Abstract:** The plight of the Nisei (Second Generation Japanese and first generation Japanese Americans) began far before the attack at Pearl Harbor. The Anti-Alien land laws and the Anti-Asiatic immigration laws of years previously had created a detrimental impact on the relationship between the Nisei and their Issei parents. This inherent racism on the Issei was placed on the Nisei as they grew up as countrymen in a country that looked down upon them, creating a barrier between the two that would corrode their relationship before the attack at Pearl Harbor. All this came to the surface with the attack and later the proclamation of Executive Order 9066; which called for the internment of all people of Japanese ancestry. The Issei called upon the community to cooperate with the government while the Nisei, who were American, looked to stay out of the camps at any means necessary which commonly meant reporting their parents to the FBI or War Relocation Authority for "suspicious" activities. This was all for not as soon 110,000 people of Japanese ancestry were placed into relocation camps ranging from California to Arkansas. The clash of the inherently Japanese sympathetic Issei and the Americanized Nisei came into focus now as the Nisei were viewed more trustworthy and were granted a role in camp government, resulting in barring the Issei from any role. Historians have taken this event up now as the "greatest generation" generally excludes the Nisei due to them commonly being viewed as the enemy during the time period. Historians such Paul Spickard and Tetsuden Kashima have lead research on this sensitive topic for an ethnic group that looks on themselves with the highest regard. Still as this generation begins to fade away many Nisei, such as my grandparents and the Nisei community in general, have given their accounts of life before camp and while in camp and the relationship with their parents as it slowly deteriorated afterwards. Though tons of research has been compiled of the life of the Japanese while in camp, seldom has the relationship between the Issei and Nisei been brought up and how camp life proved to be detrimental to their relationship rather than bringing them closer as a community.

## **Ronald KING (See abstract under Kory ESCOBAR)**

## **Emma KOST**

Title of Project: Interest and Participation in Track and Field among youth in Union, Baker, and Wallowa Counties

Type of Presentation: Poster Presentation

Location: Loso Lobby

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** TrackTown Youth League is an organization that hosts free track meets for youth all over Oregon. Their goal is to promote physical activity across all backgrounds and income levels of boys and girls ages 8-14, and to promote the sport of track and field, as it is not a highly participated in sport. Purpose: To evaluate interest and current participation levels of students in the sport of track and field at schools in eastern Oregon and get an estimate on turnout for the free TrackTown meet. Methods: A paper questionnaire was administered in various school PE classes in grades 3-8 (ages 8-14). Students were then informed about TrackTown Youth League. Results: Questionnaires are still being administered, so no solid data will be present until Spring Symposium. Conclusion: A youth meet is to be held at EOU at the beginning

of June where we will get a true quota of participation levels in the meet. It is estimated that the turnout will be higher because youth will be more knowledgeable about the sport, and the event will be better advertised.

**Donni LATER with Fallon Craig, Victoria Davis, Devon Galiszewski, Denise Gravener, Erica Hitzman, Yana Schlafke, Maddie Royce and Sheyenne Johnson**

Title of Project: Senior Art Major Studio Tour

Type of Presentation: Exhibit

Location: Senior Art Studio (behind Ackerman Hall)

Presentation Time: 12:00 p.m. - 2:00 p.m.

*Faculty Sponsor: Cory Peeke*

**Abstract:** Nine senior Art majors will be in their studio spaces working providing studio visitors with the ability to see how each artist produces their work as well as engage directly with the artists within the rarely seen environment in which their work is created. Donni Later's mixed media work engages with ideas of familial relationships and identity, Fallon Craig's photo-based pieces investigate questions of family and traditions of Christianity, Victoria Davis' photography attempts to give visual representation to the feelings of her sitters, Devon Galiszewski's process oriented paintings are inspired by topography and engage with ideas of growth and decay, Denise Gravener's pieces explore memory and loss as related to personal family history, Erica Hitzman's paintings explore aging, objectification and the idea of beauty. Sheyenne Johnson's work investigates the cognitive feelings of disconnect and connection, Yana Schlafke's work is an exploration of intuition and the process of creation, and Maddie Royces' photographic and sculptural pieces explore ideas of aging and the beauty of decay. Each of these artists' conceptually driven works provide attendees an opportunity for both aesthetic as well as philosophical engagement.

**Travis LOWE with Sydney Nelson**

Title of Project: Applying a Multilinear Regression Model to Predict Air Quality in Burns, Oregon

Type of Presentation: Talk

Location: Badgley Hall 144

Presentation Time: 10:30 a.m. - 10:55 a.m.

*Faculty Sponsor: Amy Yielding*

**Abstract:** The City of Burns, Oregon has a serious air quality issue. The city frequently experiences very high levels of PM2.5. PM2.5 consists of a variety of particulates whose size is less than 2.5 micrometers. Such particulates can be inhaled and generally accumulate in the lungs of humans, displaying a strong positive correlation with the instance of lung cancers. Field burning and wood burning for heat combined with the unique atmospheric conditions in Burns appear to be contributing to these high levels. In this talk we discuss the methods used in establishing a regression model to predict PM2.5 for Burns. In particular, we worked in collaboration with the National Oceanic and Atmospheric Administration (NOAA) as well as the Oregon Department of Environmental Quality (ODEQ), who had established a preliminary regression equation. Improvements we made to this model were adding interaction terms and including data gathered from the previous day. The resulting equation improved the predictions of PM2.5 by a 10% higher R-squared adjusted and displayed a narrower range of errors. Our model is now implemented as part of a pilot air quality alert system for the City of Burns sent out by ODEQ in collaboration with NOAA.

**Travis LOWE**

Title of Project: StarCraft: Reactive Decision Making

Type of Presentation: Poster Presentation

Location: Pierce Library

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Amy Yielding*

**Abstract:** In the real-time strategy video game StarCraft, players control an army comprised of an alien race with the goal of defeating their opponent. This research focuses on improving an average player's win chance. This is done through determining an optimized initial starting strategy and incorporating a program that determines a strategy to counter an opponent's army as observed at determined time intervals.

### **Peter MALEY**

Title of Project: Low Class Luxuries

Type of Presentation: Talk

Location: Zabel Hall 202

Presentation Time: 12:00 p.m. - 12:25 p.m.

*Faculty Sponsor: Nicole Howard*

**Abstract:** In this paper I will investigate the relationship of the working class to art in the seventeenth century Netherlands. In order to establish a context I will first look at who comprised these social classes and, specifically, what it meant to be a working class citizen living in the richest country in the seventeenth century world. Secondly, I will look at auctions, what types of items typically appeared at auctions, and how the most inexpensive items made their way down to those of limited means. In order to better understand the consumer I will also look at luxury purchases in a broader sense: How the lower class viewed art in general. Was art simply an attempt to signify status, much as it was for the upper classes, or did lower classes buy for a different reason? To expand on this, one section will focus specifically on where inexpensive art came from. Finally I attempt to view the lower class consumer through a broader lens, looking at what other examples of finery were available to lower classes, and how the idea of status symbols influenced what was considered to be art.

### **Brian MANDELLA with Alexandria Olivo, Donovan Spikerman, Jacob Johnstun**

Title of Project: Selection of DNA aptamers for rapid detection of *Renibacterium salmoninarum*

Type of Presentation: Poster Presentation

Others assisting with research: Tarita Keohokalole-Look, Anna Cavinato

Location: Simmons Gallery

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Anna Cavinato*

**Abstract:** Current tools for environmental assessment of fish pathogens have low sensitivity and require involved protocols. In the case of *Renibacterium salmoninarum* (Rs), the pathogen responsible for causing bacterial kidney disease (BKD) in salmonids, methods for its detection (ELISA, FAT and PCR) have focused primarily on tissues such as kidney or ovarian fluid, thus requiring that fish be sacrificed. Attempts to use ELISA or PCR to detect Rs in water samples have not been successful. In this study we report ongoing efforts to develop a sensor for detection of Rs in water based on DNA aptamers that show high binding affinity to p57 or Major Soluble Antigen (MSA), the principal antigenic protein found on the bacterium cell surface. Aptamer pools are currently being enriched through SELEX (Systematic Evolution of Ligands by EXponential amplification) by using affinity chromatography. Future modifications will include the use of graphene oxide (GO), which has been shown to increase the efficiency of the selection.

**Brian MANDELLA (See abstract under Donovan SPIKERMANN)**

**Justina MARTIN**

Title of Project: Gilmore Girls Rhetoric and Class: Keeping the Social Hierarchy Through Privileged Education and Obscure Literary and Pop Culture References

Type of Presentation: Remote Presentation

Location: Badgley Hall 146

Presentation Time: 11:00 a.m. - 11:25 a.m.

*Faculty Sponsor: Nancy Knowles*

Justina Martin is a member of Phi Kappa Phi Honor Society.

**Abstract:** Despite arguments of America being a modern, first-world republic, there are still glaring discrepancies in the cultural norms of the social classes which maintains the hierarchy of these classes. These differences become obvious in modern-day television shows with portrayals of differing class discourses. The television show Gilmore Girls employs middle- and upper-class rhetoric to maintain social and class hierarchy and traditional gender roles with its use of elite education portrayals and rapid-fire dialogue referencing obscure literature, pop-culture, and upper-class education concerns. By applying James Paul Gee's study of discourses to the rhetoric used in the show, we see that social class boundaries are maintained through the inability of classes to communicate with each other. The upper-class discourses of the elite characters compared to the middle-class discourses of the main characters show confusion and miscommunication between these two classes. Likewise, comparing the two discourses to lower class and even middle-class viewers' discourses shows the same confusion and miscommunication. These comparisons of discourses illustrate that popular shows like Gilmore Girls reinforce class hierarchies in modern American society.

**Zoe MATHIAS (See abstract under Alannah JONES)****Alex McHADDAD**

Title of Project: The Facebook Primary

Type of Presentation: Talk

Location: Zabel Hall 202

Presentation Time: 11:00 a.m. - 11:25 a.m.

*Faculty Sponsor: Peter Maille*

**Abstract:** Begun in September of 2015, the Facebook Primary is a project to use social media following as a predictor for a Presidential candidate's success in the primaries. Facebook page likes for as many as 27 candidates were collected on the 15th of every month, with total average growth, page likes by month, and growth in page likes by month were analyzed. By March, several primaries had taken place, allowing for a full comparison of social media following and delegates to gauge electoral success. Facebook likes proved to be an effective predictor for the success of GOP candidates, ineffective for Democratic candidates, and unknown for Libertarian candidates, since candidates for this party made late announcements. Due to the positive correlation between social media presence and delegate count, Facebook page likes could be an effective predictor for success in future primaries and elections with a large field of candidates.

**Jessica McKIM (See abstract under Theresa HAMMAN)****Deanna MELVOEN**

Title of Project: Effect of Aqua Jogging on improving running economy in novice female runners.

Type of Presentation: Poster Presentation

Others assisting with research: Kyle Pfaffenbach

Location: Simmons Gallery

Presentation Time: 12:00 p.m. - 12:50 p.m.

Faculty Sponsor: *Kyle Pfaffenbach*

**Abstract:** Starting a running program can be stressful on the body because of the high impact. Women especially are very prone to injuries due to improper running form. An alternative to land running is deep water running. Deep water running offers a zero impact form of running. Research on if deep water running can be a safe start to a running program is lacking. The purpose of this study is to examine the effects of deep water running on novice female runners and determine if deep water running is a safer way to begin a running program. 11 college aged females participated in this study and underwent base line testing involving physiology measurements with a metabolic cart, blood analysis testing, and video recording of running technique. Subjects then participated in a 6 week deep water running program, twice a week for 45 minute sessions. Running sessions included endurance, threshold, and high intensity interval workouts. After the 6 weeks of deep water running, measurements taken at baseline were tested again for individual comparison.

**Crystal MITCHELL (See abstract under Jeremy BARD)**

**Cheyenne MOLT (See abstract under Kaeliana DEVERA)**

**Cheyenne MOLT**

Title of Project: Self-Efficacy and SCT theory

Type of Presentation: Poster Presentation

Others assisting with research: Justin Fuller, Kayliana Devera, Emily Elsner

Location: Pierce Library

Presentation Time: 1:00 p.m. - 1:50 p.m.

Faculty Sponsor: *Kelly Rice*

**Abstract:** Social cognitive variables have been found to be effective mediators of change in physical activity among adolescents. At a local school 59% of students noted that they do not participate in after school programs, or sports. These students are at risk for inactivity and risky health behaviors. **PURPOSE:** The purpose of this study is to evaluate if physical activity increased students self-efficacy in making their own decisions to participate in after school programs, and outdoor activities. **METHODS:** A survey on the Social Cognitive Theory was handed out to each student at the beginning of the program, 10 weeks, and another at 20 weeks to assess the barriers, social support, strategies, and decision making they felt they could do. The survey answers were documented into a excel spreadsheet program, and evaluated. **RESULTS:** after comparing pre-test, and mid- test data we found that many areas of the SCT (social cognitive theory) evaluation had slightly increased such as average barriers to self-efficacy (.105), and some decreases in other areas such as friends social support which dropped a slight (.11), and family social support which dropped by (.54) points. We still have one more survey to conduct at 20 weeks and will be able to obtain more data and reflect and evaluate the program and students self-efficacy strategies further in depth. **CONCLUSION:** The ultimate goal of this program is for 7-8th graders to report an increased in self-efficacy with physical activity involvement. This is a pilot study and is still being worked on and constructed at this time, the data is preliminary and is ongoing at this time.

**Darcy MORALES with Caitlynn Barton, Michael Hillman**

Title of Project: Structural Elucidation of Novel Pyrrolizidine Alkaloids from Cacalioid Astera-ceae

Others assisting with research: Andrew Shreve

Type of Presentation: Poster Presentation

Location: Simmons Gallery

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Ronald Kelley*

**Abstract:** Pyrrolizidine alkaloids (PA's) are potentially toxic, naturally occurring secondary products, typically found in the plant family Asteraceae. As part of an alkaloid analysis of the Asteraceae family, multiple species from the cacalioid section of the Senecio tribe of the family were analyzed to establish pyrrolizidine alkaloid content. Previous work examined three different species, *Psacalium decompositum*, *Arnoglossum plantagineum*, and *Yermo xanthocephalus* generating their GC-MS PA profiles. Subsequent efforts focused on the structural elucidation of the major PA's using NMR techniques. Current work aims to establish the identity of a novel major otonecine-based PA that has been discovered in our laboratory from these three sources.

**Mico James MURPHY (See abstract under Ryan BLANCHARD)**

**Sydney NELSON (See abstract under Travis LOWE)**

**Candi NIELSEN with Rikki Griffin, Hannah Brandsma, Roszanne Cornford**

Title of Project: MESA's 2nd Annual Recycled Art Contest

Others assisting with research: Austin Saunders and other MESA members

Type of Presentation: Exhibit

Location: Loso Lobby

Presentation Time: 10:00 a.m. - 1:00 p.m.

*Faculty Sponsor: Rosemary Powers*

**Abstract:** In an effort to encourage on campus students and community members alike to recycle and that recycling can be fun, we decided to have a contest to see what kind of artwork folks could make out of recycled materials. Their participation in this will show off not only the many recyclable materials around us, but will also highlight how creativity can reduce the amount of waste sent to the landfill. Each piece of artwork must meet a certain set of criteria and these are that the piece must be made of at least 80% recycled materials and these items can include, but are not limited to: recycled aluminum, old telephone books, old books, old clothing, newspaper, plastics, magazines, etc. The use of non-recycled fasteners is permitted, with such items as glue or tape. The use of paint is allowed, as long as the paint is old paint that is being re-purposed. The artwork can be from any art medium, such as painting, drawing, mixed media, wood work, sculpture, etc. People are encouraged to come and vote for their favorite piece and prizes will be awarded for both People's Choice and Judge's Choice.

**Zachary NILSSON (See abstract under Jeremy BARD)**

**Zachary NILSSON (See abstract under Jeremy BARD)**

**Samantha O'CONNER**

Title of Project: Shadow of Gold

Type of Presentation: Talk

Others assisting with research: Nancy Knowles

Location: Badgley Hall 144

Presentation Time: 11:00 a.m. - 11:25 a.m.

*Faculty Sponsor: James Stolen*

**Abstract:** Nothing is as it seems in "Shadow of Gold" with the fate of a kingdom on the shoulders of a prince reluctant to take the throne. This screenplay focuses on a variety of characters, the main being the prince, Sky. In the first act, Sky is determined to be free from the ties of the throne and sets off on a journey to find his kidnapped older twin brother. At the end of

this act and the beginning of the second, we meet Sky's two companions Kasten and Cedric who agree to help him through the dangerous territory of a poisonous forest. In the third act, Sky's brother Cloud is revealed, loyalties are broken, and everyone's true natures are revealed. In this panel, I will be having two people read from Act One where we meet Kasten, the third member of Sky's group, and reveal the relationships between the three men. At the end of the panel, I will have a Q and A regarding my creative process in writing "Shadow of Gold".

**Samantha O'CONNOR** (See abstract under Theresa HAMMAN)

**Christopher ODAI** (See abstract under Haley HILL)

**Christopher ODAI** (See abstract under Theresa HAMMAN)

**Alexandria OLIVO** (See abstract under Brian MANDELLA)

**John PAYNE**

Title of Project: Skills Football Camp

Type of Presentation: Poster Presentation

Location: Pierce Library

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** Looking at local children's knowledge of football, knowledge of concussions, and if their local coaches are teaching them the right way to tackle. Introduction: Putting on a football camp to see their knowledge and to also teach them the right way to play the game. The camp will focus on the fundamentals of the game and will have an emphasis on tackling. Methods: There will be a pre-camp survey that will be handed out when the children arrive and register. There will also be a post-camp survey to see what they took away from the camp and to see if their coach taught them the certain way to tackle. Results: The participants were gathered from the local elementary schools and middle school. Approximately 420 flyers were given out to the schools. Out of 24 participants, only 1 knew the 5 fundamentals of football, 5 participants answered the correct 4 fundamentals, and the rest of the participants answered 3 or less. 30% of the students did not know how to tackle correctly and that you should keep your head up when tackling. After looking at the post-camp survey, 100% of the participants learned something new at the camp. Only 4 participants stated that their coach has not taught them the correct way to tackle. 100% of the participants stated that they had fun at the camp and that they would want to see it happen again. Conclusion: The camp will teach them the fundamentals of the game, it will have a specific focus on tackling, and it will see how much of the correct stuff their coaches are teaching them.

**Dean RICKER** (See abstract under Ryan BLANCHARD)

**Micaela RILEY**

Title of Project: The Effects of Resisted-Aquatic Exercise on Proprioception, Balance and Fall Prevention in Females aged 58-72 years Old

Type of Presentation: Poster Presentation

Location: Pierce Library

Others assisting with research: Baylee Shelton, Corrine Dutto MPT

Presentation Time: 1:00 p.m. - 1:50 p.m.

*Faculty Sponsor: Kyle Pfaffenbach*

**Abstract:** Background: Research suggests that as females age the risk for falls increase. Re-

cently, there has been a rise in fall risk within females aged 58-72 years old. Females within this age range are considered to be the most common people to experience falls. Falling can cause detrimental effects such as hip fractures, decreased mobility, and shorten a female's lifespan. Purpose Statement: The purpose of this study is examine the effects of resisted-aquatic exercise in older female adults aged 58-72 years old. Methods: Ten females aged 58-72 years old participated in a randomized-controlled study with two experimental conditions, one where subjects performed baseline functional testing and participated in resisted aquatic exercise for one hour; and one control where the subjects performed baseline functional testing and sitting for one hour. We measured functional abilities for each subject under each condition.

**Maddie ROYCE (See abstract under Donnie LATER)**

**Tiffany RYAN**

Title of Project: Effectiveness of a 4 week nutritional seminar series on knowledge gained in college students

Type of Presentation: Talk

Location: Badgley Hall 146

Presentation Time: 10:00 a.m. - 10:25 a.m.

*Faculty Sponsor: Kyle Pfaffenbach*

**Abstract:** According to the National Cancer Institute, adequate diet, exercise, and proper sleep can increase life expectancy significantly. To help increase dietary knowledge amongst EOU students, we developed a free series of lectures discussing basic health and offered the classes to the public. The first class involved basic health and nutrition; the second class entailed how to pack quick and healthy meals with an emphasis on the importance of distinguishing fats; the third class provided knowledge on the benefits of good health and exercise; and the final class was a comparison of different diets and food ideals with an overall conclusion of the knowledge gained. A five question pre and post-test evaluated individuals on gained knowledge for each class. The pre and post test scores from 42 subjects showed a significant improvement of knowledge with a P value < 0.001. There was an average of 17.6% in gained knowledge following the pre and post test scores. In conclusion, basic health and nutrient series can help to provide adequate skills in gained knowledge to in turn help prevent chronic disease by understanding proper nutrition and health.

**Austin SAUNDERS**

Title of Project: Nineteenth-Century, Gendered Conceptions of Anglo-Saxon Whiteness and the Abolitionism of the Transcendentalist Minister Theodore Parker

Type of Presentation: Talk

Location: Badgley Hall 146

Presentation Time: 10:30 a.m. - 10:55 a.m.

*Faculty Sponsor: Nicole Howard*

**Abstract:** In the 1840s and 50s, transcendental minister Theodore Parker was able to gain support for the abolitionist cause by employing a rhetoric steeped in a conservative, masculinized version of Anglo-Saxon superiority. Parker's gendered rhetoric of race applied notions of Anglo-Saxon freedom to the moral imperative of his cause, advancing a new brand of white American nationalism. Though such racial views seem problematic for someone advocating the end of slavery, consideration of his upbringing, social class, and character provide insight into this matter. Parker and his abolitionism must be understood contextually if his seemingly contradictory ideas about race are to make sense. Whereas other scholars of transcendentalism have either skirted explaining the role his understanding of race played in his abolitionism or avoided it and his abolitionism altogether, a fuller understanding of the context within which

he was operating—one that acknowledges and addresses these inconsistencies—is necessary to have an understanding not only of his transcendental brand of abolitionism, but also the racial attitudes that comprise its legacy.

**Yana SCHLAFKE (See abstract under Donnie LATER)**

**Baylee SHELTON**

Title of Project: Review of the Effectiveness of Implementing an Imagery Intervention Among Athletes to Improve Rehabilitation Outcomes Post Anterior Cruciate Ligament Reconstruction

Type of Presentation: Poster Presentation

Location: Pierce Library

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Brian Sather*

**Abstract:** This paper aims to give a comprehensive analysis of the efficacy of an imagery program in conjunction with a standard physical therapy program for athletes rehabilitating from anterior cruciate ligament (ACL) reconstruction by reviewing previous experiments that have been conducted. It has been demonstrated that the implementation of an imagery intervention in addition to standard physical therapy care increases knee laxity and knee strength, and decreases re-injury anxiety. Imagery interventions have also been shown to benefit pain and stress management, empowerment, and control of recovery. Contrarily, imagery interventions have not been proven to enhance adherence to physical therapy rehabilitation programs. Doctors of physical therapy should be aware of the benefits of applying imagery techniques, and should consider the implementation of an imagery program.

**Forrest SMITH**

Title of Project: The Filmmaking Process of Fidelity

Type of Presentation: Talk

Others assisting with research: Kevin Roy, April Curtis

Location: Badgley Hall 148

Presentation Time: 1:00 p.m. - 1:25 p.m.

*Faculty Sponsor: Kevin Roy*

**Abstract:** The process of creating an independent film will be presented as one of the last Film Production students shares his filmmaking experience. The presentation will consist of a description of the writing process of the film's script, the pre-production, the filming, and the post-production stages of the student's film. Months of planning, collaboration, and creative expression have resulted in an edgy short film called Fidelity which will be premiered during this presentation with a concluding question and answer session.

**Erin SODERBERG**

Title of Project: The Feisty French Females: A Historiography of Women in the French Revolution

Type of Presentation: Talk

Location: Badgley Hall 144

Presentation Time: 12:00 p.m. - 12:25 p.m.

*Faculty Sponsor: Nicole Howard*

**Abstract:** This project analyzes the role of women in the French Revolution in the form of a historiography. Prior to the mid 1980's the literature on women in the French Revolution was limited; this project will consider why there has been a shift in focus of the literature on women in the French Revolution in this particular decade. Specifically, it will examine French women in the domestic, political, and religious areas and how historians have depicted these women. While this project will examine the literature from the mid twentieth century, it will specifically

examine the work of historians Dena Goodman, Suzanne Desan, Joan Landes, Sarah Maza, Joan Wallach Scott, Lynn Hunt, and Olwen Hufton. The combination of these historians and a combination of key secondary sources will lead to a comprehensive examination of how and why French women have been so intensively studied in the late twentieth century. This paper will not only be a study on the arc of literature produced but also how historians have changed how they write about women in the French Revolution.

### **Emily SPEARS**

Title of Project: Effect of real-time visual and verbal feedback vs. verbal feedback only on running mechanics in female distance runners.

Type of Presentation: Poster Presentation

Others assisting with research: Shantay Mayes, Kyle Pfaffenbach

Location: Simmons Gallery

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Kyle Pfaffenbach*

**Abstract:** Running is a common form of exercise. However, there are form related injuries that can affect many individuals. Studies have shown that women are more affected by these form related injuries than men. The purpose of this study is to compare the effectiveness of verbal and visual feedback vs. verbal feedback only on altering running mechanics that may reduce injury risk in female runners. Twenty recreational female runners participated in a blind-randomized controlled study with ten subjects in the verbal and visual feedback group and ten subjects in the verbal feedback only group. There were two separate testing days, one being the initial running assessment and the other being the follow up running assessment. With the input of our licensed physical therapist Shantay Mayes, we analyzed subject running mechanics using an inexpensive app called Dartfish motion analysis on an iPad that was rented from the university. The purpose of our experiment was to use easily accessible and affordable equipment so that anyone who wants to analyze running form, such as coaches or physical therapists, would be able to. We executed this strategy by only using iPhone 6's to record the video of each of the subjects.

### **Donovan SPIKERMAN (See abstract under Brian MANDELLA)**

**Donovan SPIKERMAN** with Brian Mandella, Ryan Hunt

Title of Project: Extraction and Quantitation of Cannabinoids in Locally Grown Medicinal Cannabis Flowers and Other Extraction Products

Type of Presentation: Poster Presentation

Location: Loso Lobby

Presentation Time: 11:00 a.m. - 11:50 a.m.

*Faculty Sponsor: Jeremy Riggle*

**Abstract:** The medicinal properties of Cannabis sativa and indica have been known for centuries. More recently, the class of phytocannabinoid compounds, which are exclusive to the cannabis plant, have been recognized as the primary bioactive compounds. Over 100 different cannabinoids have been identified and characterized in the cannabis plant. Under the Oregon Medical Marijuana Program, medical cannabis must be analyzed for the levels of  $\Delta^9$ -Tetrahydrocannabinol (THC),  $\Delta^9$ -Tetrahydrocannabinolic acid (THC-A), Cannabidiol (CBD), and Cannabinol (CBN) before it can be sold in a dispensary. These compounds, especially CBD, have many known medical uses, such as anticonvulsive, anti-anxiety, and antimicrobial activity. In this project we analyzed medical cannabis flowers, grown locally in Eastern Oregon, for THC, THC-A, CBD, and CBN. In addition to analyzing flowers, other forms of cannabis medicines were tested, including edibles, concentrates, and waxes.

### **Donovan SPIKERMAN**

Title of Project: Medicinal Marijuana: Fact or Fiction?

Type of Presentation: Talk

Location: Zabel Hall 256

Presentation Time: 12:00 p.m. - 12:25 p.m.

*Faculty Sponsor: Jeremy Riggle*

**Abstract:** The discovery of the human endocannabinoid system (ECS) in 1990, the associated G-protein coupled receptors (CB-1 and CB-2) as well as the endocannabinoids anandamide and arachidonylglycerol has led to a significant increase in our understanding of this system and its role in cellular processes. Research indicates that the ECS is intimately involved in the maintenance of homeostasis within cells which has opened up numerous possibilities for the potential treatment of a legion of physical ailments ranging from epilepsy to addiction. This talk discusses the details of the endocannabinoid system, its function within the human body and the role phytocannabinoids play in regulating and maintaining this system. In addition, current clinical reviews will be analyzed and discussed in order to evaluate the possibility of cannabinoid therapy as a legitimate treatment option for specific conditions.

### **Brian STAEBLER-SIEWELL**

Title of Project: Synthesis of lithium phosphate and calcium phosphate thin films by prompt condensation of aqueous precursors

Type of Presentation: Poster Presentation

Others assisting with research: Colby Heideman

Location: Zabel 2nd Floor

Presentation Time: 10:00 a.m. - 10:50 a.m.

*Faculty Sponsor: Colby Heideman*

**Abstract:** During this study, different wafer cleaning methods were explored in an attempt to improve film coverage and uniformity. These methods include potassium hydroxide etching, water rinse, and cleaning in a sonic cleaner with varying concentrations of detergent. After a suitable cleaning process was developed, varying concentrations of both lithium phosphate and calcium phosphate solutions were spin coated onto cleaned silicon wafers, and then soft baked to dehydrate the films and encourage crosslinking between inorganic species. Varying thickness of both single layered and multilayered films prepared from both solutions were investigated. The effect of making multi-layered films was explored by alternating layers of the two solutions on the same film.

### **Connar STONE (See abstract under Theresa HAMMAN)**

### **Erica TORRES GONZALEZ**

Title of Project: Middle School Youth: Bullying Issues in PE

Type of Presentation: Talk

Others assisting with research: Physical Education instructors

Location: Badgley Hall 148

Presentation Time: 10:30 a.m. - 10:55 a.m.

*Faculty Sponsor: Kyle Pfaffenbach*

**Abstract:** The purpose of this project was to learn more about how instructors dealt with acute bullying issues in a physical education setting and what they found to be beneficial for student's overall success. CDC, 2011 illustrated how greater percentage of middle school students (26.8%) than high school students (15.6%) were categorized as victims of bullying, and for both groups of students, the percentage of victims was greater than the percentage of

bullies (7.5% for middle school and 8.4% for high school) and bully-victims (9.6% for middle school and 6.5% for high school). By thoroughly researching guidelines to reduce top 5 different types of bullying (verbal, physical, social/ emotional/ relational, psychological, cyber) and by asking three questions to knowledgeable PE instructors, I found new guidelines to prevent bullying. Furthermore, the effectiveness of decreasing verbal bullying behaviors in middle school adolescents may improve their self-esteem level; thus, create a greater opportunity for student to exercise and motivate others. As such, student may demonstrate vigorous athletic abilities after gaining courage to participate more during a physical education class.

**Carolina VALADEZ (See abstract under Jake CLEVERLEY)**

**Alexandra WHITNEY**

Title of Project: Run Girl Run Program: Improving Self Efficacy in Pre-Adolescent Girls Through Physical Activity

Type of Presentation: Poster Presentation

Others assisting with research: Alyssa Johnson, Kaitlin Kennedy, Kelly Rice

Location: Simmons Gallery

Presentation Time: 12:00 p.m. - 12:50 p.m.

*Faculty Sponsor: Kelly Rice*

**Abstract:** Introduction: Increased risk of inactivity and low self-efficacy occurs in pre-adolescent and adolescent females. Group programs allow participants to establish healthy friendships, build self-efficacy, and celebrate what makes them unique. Methods: Run Girl Run is a 10-week (2 X wk/150 mins) program aimed to increase physical activity (PA), healthy lifestyle choices, and self-efficacy in young girls. 4th and 5th grade girls from Central Elementary were recruited through classroom visitation. Surveys were given to measure the participants' belief in self along with thoughts on how parents and peers perceive them. Results: 26 registered participants ranging in demographics between the ages of 9 and 12 (average=10.24). Part one of a two-part survey series has been conducted and participants were measured on a 5-point Likert scale. Mean  $\pm$  SD for survey include: social support- family ( $4.4 \pm 0.79$ ), social support- peers ( $4.4 \pm 0.84$ ), satisfaction of PA ( $4.3 \pm 0.79$ ), and self-belief ( $3.9 \pm 1.19$ ). Conclusion: This program evaluates changes in self-efficacy and attitudes towards physical activity and creating a healthier lifestyle. With changes already examined, we recommend implementation of positive feedback, intrinsic and extrinsic rewards, and mild physical activities as an intervention to enhance overall self-efficacy in the individuals.

## Presenters by Time and Location

### 10:00 a.m. - 10:25 a.m.

Location: Badgley Hall 146, 10:00 a.m.

**Presenter: Tiffany Ryan**

Format: Talk

Project Title: Effectiveness of a 4 week nutritional seminar series on knowledge gained in college students

*Faculty Sponsor: Kyle Pfaffenbach*

Location: Zabel Hall 201, 10:00 a.m.

**Presenter: Jessica Griffin Conner**

Format: Talk

Project Title: Tin Men: The Evolution of the Android in Popular Culture

*Faculty Sponsor: Rebecca Hartman*

Location: Zabel Hall 202, 10:00 a.m.

**Presenter: Brittany Hargrove**

Format: Talk

Project Title: Event Planning for a Major Speaking Event

*Faculty Sponsor: April Curtis*

### 10:00 a.m. - 10:50 a.m.

Location: Loso Hall 117, 10:00 a.m.

**Presenters: Haley Hill, Christopher Odai**

Format: Panel Presentation

Project Title: Lone Warriors: Stories of Grief and Loss

*Faculty Sponsor: Nancy Knowles*

Location: Loso Lobby, 10:00 a.m.

**Presenters: Jeremy Bard, Zach Nilsson, Katie Hamann, Crystal Mitchell**

Format: Poster Presentation

Project Title: Distal Heme Coordination in Ferric Cytochrome c'

*Faculty Sponsor: Colin Andrew*

Location: Loso Lobby, 10:00 a.m.

**Presenter: Alannah Jones**

Format: Exhibit

Project Title: Braid Groups

*Faculty Sponsor: Amy Yielding*

Location: Loso Lobby, 10:00 a.m.

**Presenter: Emma Kost**

Format: Poster Presentation

Project Title: Interest and Participation in Track and Field among youth in Union, Baker, and Wal-lowa Counties

*Faculty Sponsor: Kelly Rice*

Location: Pierce Library, 10:00 a.m.

**Presenter: John Payne**

Format: Poster Presentation

Project Title: Skills Football Camp

*Faculty Sponsor: Kelly Rice*

Location: Simmons Gallery, 10:00 a.m.

**Presenters: Brian Mandella, Alexandria Olivo, Donovan Spikerman, Jacob Johnstun**

Format: Poster Presentation

Project Title: Selection of DNA aptamers for rapid detection of Renibacterium salmoninarum

*Faculty Sponsor: Anna Cavinato*

Location: Simmons Gallery, 10:00 a.m.

**Presenters: Kaeliana Devera, Justin Fuller, Emily Elsner, Cheyenne Molt**

Format: Poster Presentation

Project Title: GO-ASAP

*Faculty Sponsor: Kelly Rice*

Location: Simmons Gallery, 10:00 a.m.

**Presenters: Katie M. Harris, Ella A. Clow**

Format: Poster Presentation

Project Title: Selection of protein-binding DNA aptamers for bacterial detection in salmon

*Faculty Sponsor: Anna Cavinato*

Location: Zabel 2nd Floor, 10:00 a.m.

**Presenter: Alyssa Johnson**

Format: Poster Presentation

Project Title: Run Girl Run Program: Impact on Psychological Aspects of Physical Activity/Fitness

*Faculty Sponsor: Kelly Rice*

Location: Zabel 2nd Floor, 10:00 a.m.

**Presenter: Brian Staebler-Siewell**

Format: Poster Presentation

Project Title: Synthesis of lithium phosphate and calcium phosphate thin films by prompt condensation of aqueous precursors

*Faculty Sponsor: Colby Heideman*

### 10:00 a.m. - 12:00 p.m.

Location: Hoke Union Building 339, 10:00 a.m.

**Presenters: High school students from Milton-Freewater, Pendleton, Umatilla and Vale**

Format: Poster Presentations

*Project Sponsor: Oregon Teacher Pathways and College of Business at Eastern Oregon University*

### 10:00 a.m. - 1:00 p.m.

Location: Loso Lobby, 10:00 a.m.

**Presenters: Candrina Nielsen,**

**Hannah Brandsma, Roszanne Cornford,  
Rikki Griffin**

Format: Exhibit

Project Title: MESA's 2nd Annual Recycled Art Contest

*Faculty Sponsor: Rosemary Powers*

**10:30 a.m. - 10:55 a.m.**

Location: Badgley Hall 144, 10:30 a.m.

**Presenters: Travis Lowe, Sydney Nelson**

Format: Talk

Project Title: Applying a Multilinear Regression Model to Predict Air Quality in Burns, Oregon

*Faculty Sponsor: Amy Yielding*

Location: Badgley Hall 146, 10:30 a.m.

**Presenter: Austin Saunders**

Format: Talk

Project Title: Nineteenth-Century, Gendered Conceptions of Anglo-Saxon Whiteness and the Abolitionism of the Transcendentalist Minister Theodore Parker

*Faculty Sponsor: Nicole Howard*

Location: Badgley Hall 148, 10:30 a.m.

**Presenter: Erica Torres Gonzalez**

Format: Talk

Project Title: Middle School Youth: Bullying Issues in PE

*Faculty Sponsor: Kyle Pfaffenbach*

**11:00 a.m. - 11:25 a.m.**

Location: Badgley Hall 144, 11:00 a.m.

**Presenter: Samantha O'Conner**

Format: Talk

Project Title: Shadow of Gold

*Faculty Sponsor: James Stolen*

Location: Badgley Hall 146, 11:00 a.m.

**Presenter: Justina Martin**

Format: Remote Presentation

Project Title: Gilmore Girls Rhetoric and Class: Keeping the Social Hierarchy Through Privileged Education and Obscure Literary and Pop Culture References

*Faculty Sponsor: Nancy Knowles*

Location: Badgley Hall 148, 11:00 a.m.

**Presenter: Denica Hill**

Format: Talk

Project Title: Dispositional and Situational Factors Effect on Moral Behaviors

*Faculty Sponsor: DeAnna Timmermann*

Location: Zabel Hall 201, 11:00 a.m.

**Presenter: Charlotte Bowers**

Format: Talk

Project Title: "A Most Beautiful Form.:" Genderless Ideals in Aesthetic Fashion and Design

*Faculty Sponsor: Nicole Howard*

Location: Zabel Hall 202, 11:00 a.m.

**Presenter: Alex McHaddad**

Format: Talk

Project Title: The Facebook Primary

*Faculty Sponsor: Peter Maille*

Location: Zabel Hall 256, 11:00 a.m.

**Presenter: Matthew Chatham**

Format: Talk

Project Title: Game Theory: How to Win at Golf

*Faculty Sponsor: Amy Yielding*

**11:00 a.m. - 11:50 a.m.**

Location: Loso Lobby, 11:00 a.m.

**Presenters: Donovan Spikerman, Brian Mandella, Ryan Hunt**

Format: Poster Presentation

Project Title: Extraction and Quantitation of Cannabinoids in Locally Grown Medicinal Cannabis Flowers and Other Extraction Products

*Faculty Sponsor: Jeremy Riggle*

Location: Loso Lobby, 11:00 a.m.

**Presenter: Angela Bonner**

Format: Poster Presentation

Project Title: Plate Testing Techniques for Cannabis resin

*Faculty Sponsor: Joe Corsini*

Location: Loso Lobby, 11:00 a.m.

**Presenter: Samuel DeVore**

Format: Poster Presentation

Project Title: Cannabinoid Therapy: A Clinical Perspective

*Faculty Sponsor: Jeremy Riggle*

Location: Pierce Library, 11:00 a.m.

**Presenter: Travis Lowe**

Format: Poster Presentation

Project Title: StarCraft: Reactive Decision Making

*Faculty Sponsor: Amy Yielding*

Location: Simmons Gallery, 11:00 a.m.

**Presenters: Darcy Morales, Caitlynn Barton, Michael Hillman**

Format: Poster Presentation

Project Title: Structural Elucidation of Novel Pyrrolizidine Alkaloids from Cactaloid Asteraceae

*Faculty Sponsor: Ronald Kelley*

Location: Simmons Gallery, 11:00 a.m.

**Presenters: Jeremy Bard, Zach Nilsson, Kenzie Garlock**

Format: Poster Presentation

Project Title: Mathematical Modeling of Heat Through a Hot Bath

*Faculty Sponsor: Anthony Tovar*

Location: Simmons Gallery, 11:00 a.m.

**Presenters: Ryan Blanchard, Dean Ricker, Mico Murphy**

Format: Poster Presentation

Project Title: Kryptos Challenge

*Faculty Sponsor: Steve Tanner*

Location: Simmons Gallery, 11:00 a.m.

**Presenter: Emily Elsner**

Format: Poster Presentation

Project Title: Get Outside-After School Activity Program

*Faculty Sponsor: Kelly Rice*

Location: Zabel 2nd Floor, 11:00 a.m.

**Presenter: Logan Deroin**

Format: Poster Presentation

Project Title: Effects of Passive vs Active Recovery during a simulated Football Game

*Faculty Sponsor: Kyle Pfaffenbach*

Location: Zabel 2nd Floor, 11:00 a.m.

**Presenter: Katherine Hood**

Format: Poster Presentation

Project Title: 2015 Survey of Mosquitoes of the Ladd Marsh Wildlife Area, Union County, Oregon

*Faculty Sponsor: Karen Antell*

## 12:00 p.m. - 12:25 p.m.

Location: Badgley Hall 144, 12:00 p.m.

**Presenter: Erin Soderberg**

Format: Talk

Project Title: The Feisty French Females: A History of Women in the French Revolution

*Faculty Sponsor: Nicole Howard*

Location: Badgley Hall 146, 12:00 p.m.

**Presenter: Nancy Bruch**

Format: Talk

Project Title: Environmental History of Celilo Falls and The Dalles Dam

*Faculty Sponsor: Nicole Howard*

Location: Zabel Hall 201, 12:00 p.m.

**Presenter: Taylor Hunt**

Format: Talk

Project Title: Digital Photography and Copying

*Faculty Sponsor: Michael Sell*

Location: Zabel Hall 202, 12:00 p.m.

**Presenter: Peter Maley**

Format: Talk

Project Title: Low Class Luxuries

*Faculty Sponsor: Nicole Howard*

Location: Zabel Hall 256, 12:00 p.m.

**Presenter: Donovan Spikerman**

Format: Talk

Project Title: Medicinal Marijuana: Fact or Fiction?

*Faculty Sponsor: Jeremy Riggle*

## 12:00 p.m. - 12:50 p.m.

Location: Badgley Hall 148, 12:00 p.m.

**Presenters: Jake Cleverley, Carly Valadez**

Format: Panel Presentation

Project Title: Modern Day Education

*Faculty Sponsor: Nancy Knowles*

Location: Loso Hall 117, 12:00 p.m.

**Presenters: Theresa Hamman, Samantha O'Conner, Christopher Odai, Jessica McKim, Connor Stone, Haley Hill**

Format: Panel Presentation

Project Title: The Creative Process: Oregon East 2016

*Faculty Sponsor: Jodi Varon*

Location: Loso Lobby, 12:00 p.m.

**Presenters: James Burklund, Charlette Burghard, Luke Guerin, Colton Dunham, Michael Hillman**

Format: Poster Presentation

Project Title: Structural Elucidation of Novel Pyrrolizidine Alkaloids from *Omphalodes aliena*

*Faculty Sponsor: Jodi Varon*

Location: Loso Lobby, 12:00 p.m.

**Presenter: Elizabeth Harry**

Format: Poster Presentation

Project Title: The relationship between angle of landing on ground reaction force and knee control

*Faculty Sponsor: Darren Dutto*

Location: Loso Lobby, 12:00 p.m.

**Presenters: Kory Escobar, Ronald King**

Format: Poster Presentation

Project Title: Test Performance: Effects of Time Pressure and Authority Presence

*Faculty Sponsor: Marianna Baykina*

Location: Pierce Library, 12:00 p.m.

**Presenter: Baylee Shelton**

Format: Poster Presentation

Project Title: Review of the Effectiveness of Implementing an Imagery Intervention Among Athletes

to Improve Rehabilitation Outcomes Post Anterior Cruciate Ligament Reconstruction  
*Faculty Sponsor: Brian Sather*

Location: Pierce Library, 12:00 p.m.  
**Presenters: Alannah Jones, Zoe Mathias**  
Format: Exhibit  
Project Title: Eastern Oregon Social Science Journal  
*Faculty Sponsor: Amy Yielding*

Location: Pierce Library, 12:00 p.m.  
**Presenter: Jeremy Bard**  
Format: Poster Presentation  
Project Title: Development of Experimental Flow Chemistry Techniques  
*Faculty Sponsor: Ronald Kelley*

Location: Simmons Gallery, 12:00 p.m.  
**Presenter: Deanna Melvoen**  
Format: Poster Presentation  
Project Title: Effect of Aqua Jogging on improving running economy in novice female runners.  
*Faculty Sponsor: Kyle Pfaffenbach*

Location: Simmons Gallery, 12:00 p.m.  
**Presenter: Alexandra Whitney**  
Format: Poster Presentation  
Project Title: Run Girl Run Program: Improving Self Efficacy in Pre-Adolescent Girls Through Physical Activity  
*Faculty Sponsor: Kelly Rice*

Location: Simmons Gallery, 12:00 p.m.  
**Presenter: Kaitlin Kennedy**  
Format: Poster Presentation  
Project Title: Run Girl Run Program: The measurement and evaluation of physical activity in pre-adolescent girls through an active running program  
*Faculty Sponsor: Kelly Rice*

Location: Simmons Gallery, 12:00 p.m.  
**Presenter: Emily Spears**  
Format: Poster Presentation  
Project Title: Effect of real-time visual and verbal feedback vs. verbal feedback only on running mechanics in female distance runners.  
*Faculty Sponsor: Kyle Pfaffenbach*

Location: Zabel 2nd Floor, 12:00 p.m.  
**Presenters: Shelby Baertsch, Misa Gonzalez**  
Format: Poster Presentation  
Project Title: Benefits of Physical Activity and Sports in Softball  
*Faculty Sponsor: Kelly Rice*

Location: Zabel 2nd Floor, 12:00 p.m.  
**Presenter: McKenzie Garlock**  
Format: Poster Presentation  
Project Title: Peg Solitaire: The Math Behind the Cross Board  
*Faculty Sponsor: Amy Yielding*

**12:00 p.m. - 2:00 p.m.**  
Location: Ackerman Senior Art Studio, 12:00 p.m.  
**Presenters: Donni Later, Fallon Craig, Victoria Davis, Devon Galiszewski, Denise Gravener, Erica Hitzman, Yana Schlafke, Maddie Royce, Sheyenne Johnson**  
Format: Exhibit  
Project Title: Senior Art Major Studio Tour  
*Faculty Sponsor: Cory Peeke*

**12:30 p.m. - 12:55 p.m.**  
Location: Badgley Hall 146, 12:30 p.m.  
**Presenter: Tyler Kido**  
Format: Talk  
Project Title: Blood of the Kazoku: How the Japanese Internment Deepened the Existing Generational Divide between the Issei and Nisei.  
*Faculty Sponsor: Nicole Howard*

**1:00 p.m. - 1:25 p.m.**  
Location: Badgley Hall 144, 1:00 p.m.  
**Presenter: Rebecca Hickox**  
Format: Talk  
Project Title: Newtonianism at a Glance: A Look into the Evolution of Newtonian Thought – Theism to Atheism  
*Faculty Sponsor: Nicole Howard*

Location: Badgley Hall 148, 1:00 p.m.  
**Presenter: Forrest Smith**  
Format: Talk  
Project Title: The Filmmaking Process of Fidelity  
*Faculty Sponsor: Kevin Roy*

Location: Zabel Hall 201, 1:00 p.m.  
**Presenter: Adonis Chavarin**  
Format: Talk  
Project Title: Internship at the Center for Student Involvement  
*Faculty Sponsor: Le Bailey*

Location: Zabel Hall 202, 1:00 p.m.  
**Presenter: Ty Bowen**  
Format: Talk  
Project Title: The Russo-Japanese War and Why it Should be Taught  
*Faculty Sponsor: Nicole Howard*

## 1:00 p.m. - 1:50 p.m.

Location: Loso Hall 117, 1:00 p.m.

**Presenter: Johnny Fulfer**

Format: Panel Presentation/Talk

Project Title: Power, House-Money, and Expected Value: The Role of Expectations in Minsky's Financial Instability Hypothesis.

Faculty Sponsor: Scott McConnell

Location: Pierce Library, 1:00 p.m.

**Presenter: Cheyenne Molt**

Format: Poster Presentation

Project Title: Self-Efficacy and SCT theory

Faculty Sponsor: Kelly Rice

Location: Pierce Library, 1:00 p.m.

**Presenter: Micaela E. Riley**

Format: Poster Presentation

Project Title: The Effects of Resisted-Aquatic Exercise on Proprioception, Balance and Fall Prevention in Females aged 58-72 years Old

Faculty Sponsor: Kyle Pfaffenbach

## Alphabetical Listing of Presenters

Name	Time of Presentation	Location	Presentation Type	Faculty Sponsor
Baertsch, Shelby	12:00 p.m. - 12:50 p.m.	Zabel 2nd Floor	Poster Presentation	Kelly Rice
Bard, Jeremy	10:00 a.m. - 10:50 a.m.	Loso Lobby	Poster Presentation	Colin Andrew
	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Anthony Tovar
	12:00 p.m. - 12:50 p.m.	Pierce Library	Poster Presentation	Ronald Kelley
Barton, Caitlynn	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Ronald Kelley
Blanchard, Ryan	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Steve Tanner
Bonner, Angela	11:00 a.m. - 11:50 a.m.	Loso Lobby	Poster Presentation	Joe Corsini
Bowen, Ty	1:00 p.m. - 1:25 p.m.	Zabel Hall 202	Talk	Nicole Howard
Bowers, Charlotte	11:00 a.m. - 11:25 a.m.	Zabel Hall 201	Talk	Nicole Howard
Brandsma, Hannah	10:00 a.m. - 1:00 p.m.	Loso Lobby	Exhibit	Rosemary Powers
Bruch, Nancy	12:00 p.m. - 12:25 p.m.	Badgley Hall 146	Talk	Nicole Howard
Burghard, Charlotte	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Ronald Kelley
Burklund, James	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Ronald Kelley
Chatham, Matthew	11:00 a.m. - 11:25 a.m.	Zabel Hall 256	Talk	Amy Yielding
Chavarin, Adonis	1:00 p.m. - 1:25 p.m.	Zabel Hall 201	Talk	Le Bailey
Clay, Dominic	10:30 a.m. - 10:55 a.m.	Zabel Hall 256	Talk	Nicole Howard
Cleverley, Jake	12:00 p.m. - 12:50 p.m.	Badgley Hall 148	Panel Presentation	Nancy Knowles
Clow, Ella	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Anna Gavinato
Cornford, Roszanne	10:00 a.m. - 1:00 p.m.	Loso Lobby	Exhibit	Rosemary Powers
Craig, Fallon	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art Studio, Exhibit		Cory Peeke
Davis, Victoria	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art Studio, Exhibit		Cory Peeke
De Vera, Kaeliana	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Kelly Rice
Deroin, Logan	11:00 a.m. - 11:50 a.m.	Zabel 2nd Floor	Poster Presentation	Kyle Pfaffenbach
DeVore, Samuel	11:00 a.m. - 11:50 a.m.	Loso Lobby	Poster Presentation	Jeremy Riggle
Dunham, Colton	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Ronald Kelley
Elsner, Emily	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Kelly Rice
	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Kelly Rice
Escobar, Kory	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Marianna Baykina
Fulfer, Johnny	1:00 p.m. - 1:50 p.m.	Loso Hall 117	Panel Presentation	Scott McConnell
Fuller, Justin	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Kelly Rice
Galiszewski, Devon	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art Studio, Exhibit		Cory Peeke
Garlock, McKenzie	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Anthony Tovar
	12:00 p.m. - 12:50 p.m.	Zabel 2nd Floor	Poster Presentation	Amy Yielding
Gonzalez, Misa	12:00 p.m. - 12:50 p.m.	Zabel 2nd Floor	Poster Presentation	Kelly Rice
Gravener, Denise	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art Studio, Exhibit		Cory Peeke
Griffin, Rikki	10:00 a.m. - 1:00 p.m.	Loso Lobby	Exhibit	Rosemary Powers

Griffin Conner, Jessica	10:00 a.m. - 10:25 a.m.	Zabel Hall 201	Talk	Rebecca Hartman
Guerin, Luke	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Ronald Kelley
Hamann, Katie	10:00 a.m. - 10:50 a.m.	Loso Lobby	Poster Presentation	Colin Andrew
Hamman, Theresa	12:00 p.m. - 12:50 p.m.	Loso Hall 117	Panel Presentation	Jodi Varon
Hargrove, Brittany	10:00 a.m. - 10:25 a.m.	Zabel Hall 202	Talk	April Curtis
Harris, Katie	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Anna Cavinato
Harry, Elizabeth	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Darren Dutto
Hickox, Rebecca	1:00 p.m. - 1:25 p.m.	Badgley Hall 144	Talk	Nicole Howard
Hill, Denica	11:00 a.m. - 11:25 a.m.	Badgley Hall 148	Talk	DeAnna Timmermann
Hill, Haley	10:00 a.m. - 10:50 a.m.	Loso Hall 117	Panel Presentation	Nancy Knowles
	12:00 p.m. - 12:50 p.m.	Loso Hall 117	Panel Presentation	Jodi Varon
Hillman, Michael	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Ronald Kelley
	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Ronald Kelley
Hitzman, Erica	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art	Studio, Exhibit	Cory Peeke
Hood, Katherine	11:00 a.m. - 11:50 a.m.	Zabel 2nd Floor	Poster Presentation	Karen Antell
Hunt, Ryan	11:00 a.m. - 11:50 a.m.	Loso Lobby	Poster Presentation	Jeremy Riggle
Hunt, Taylor	12:00 p.m. - 12:25 p.m.	Zabel Hall 201	Talk	Michael Sell
Johnson, Alyssa	10:00 a.m. - 10:50 a.m.	Zabel 2nd Floor	Poster Presentation	Kelly Rice
Johnson, Sheyenne	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art	Studio, Exhibit	Cory Peeke
Johnstun, Jacob	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Anna Cavinato
Jones, Alannah	10:00 a.m. - 10:50 a.m.	Loso Lobby	Exhibit	Amy Yielding
	12:00 p.m. - 12:50 p.m.	Pierce Library	Exhibit	Amy Yielding
Kennedy, Kaitlin	12:00 p.m. - 12:50 p.m.	Simmons Gallery	Poster Presentation	Kelly Rice
Kido, Tyler	12:30 p.m. - 12:55 p.m.	Badgley Hall 146	Talk	Nicole Howard
King, Ronald	12:00 p.m. - 12:50 p.m.	Loso Lobby	Poster Presentation	Marianna Baykina
Kost, Emma	10:00 a.m. - 10:50 a.m.	Loso Lobby	Poster Presentation	Kelly Rice
Later, Donni	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art	Studio, Exhibit	Cory Peeke
Lowe, Travis	10:30 a.m. - 10:55 a.m.	Badgley Hall 144	Talk	Amy Yielding
	11:00 a.m. - 11:50 a.m.	Pierce Library	Poster Presentation	Amy Yielding
Maley, Peter	12:00 p.m. - 12:25 p.m.	Zabel Hall 202	Talk	Nicole Howard
Mandella, Brian	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Anna Cavinato
	1:00 a.m. - 11:50 a.m.	Loso Lobby	Poster Presentation	Jeremy Riggle
Martin, Justina	11:00 a.m. - 11:25 a.m.	Badgley Hall 146	Remote Presentation	Nancy Knowles
Mathias, Zoe	12:00 p.m. - 12:50 p.m.	Pierce Library	Exhibit	Amy Yielding
McHaddad, Alex	11:00 a.m. - 11:25 a.m.	Zabel Hall 202	Talk	Peter Maille
McKim, Jessica	12:00 p.m. - 12:50 p.m.	Loso Hall 117	Panel Presentation	Jodi Varon
Melvoen, Deanna	12:00 p.m. - 12:50 p.m.	Simmons Gallery	Poster Presentation	Kyle Pfaffenbach
Mitchell, Crystal	10:00 a.m. - 10:50 a.m.	Loso Lobby	Poster Presentation	Colin Andrew
Molt, Cheyenne	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Kelly Rice
	1:00 p.m. - 1:50 p.m.	Pierce Library	Poster Presentation	Kelly Rice
Morales, Darcy	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Ronald Kelley
Murphy, Mico	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Steve Tanner
Nelson, Sydney	10:30 a.m. - 10:55 a.m.	Badgley Hall 144	Talk	Amy Yielding
Nielsen, Candrina	10:00 a.m. - 1:00 p.m.	Loso Lobby	Exhibit	Rosemary Powers
Nilsson, Zach	10:00 a.m. - 10:50 a.m.	Loso Lobby	Poster Presentation	Colin Andrew
	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Anthony Tovar
O'Conner, Samantha	11:00 a.m. - 11:25 a.m.	Badgley Hall 144	Talk	James Stolen
	12:00 p.m. - 12:50 p.m.	Loso Hall 117	Panel Presentation	Jodi Varon
Odai, Christopher	10:00 a.m. - 10:50 a.m.	Loso Hall 117	Panel Presentation	Nancy Knowles
	12:00 p.m. - 12:50 p.m.	Loso Hall 117	Panel Presentation	Jodi Varon
Olivo, Alexandria	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Anna Cavinato
Payne, John	10:00 a.m. - 10:50 a.m.	Pierce Library	Poster Presentation	Kelly Rice
Ricker, Dean	11:00 a.m. - 11:50 a.m.	Simmons Gallery	Poster Presentation	Steve Tanner
Riley, Micaela	1:00 p.m. - 1:50 p.m.	Pierce Library	Poster Presentation	Kyle Pfaffenbach
Royce, Maddie	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art	Studio, Exhibit	Cory Peeke
Ryan, Tiffany	10:00 a.m. - 10:25 a.m.	Badgley Hall 146	Talk	Kyle Pfaffenbach

Saunders, Austin	10:30 a.m. - 10:55 a.m.	Badgley Hall 146	Talk	Nicole Howard
Schlafke, Yana	12:00 p.m. - 2:00 p.m.	Ackerman Senior Art Studio, Exhibit		Cory Peeke
Shelton, Baylee	12:00 p.m. - 12:50 p.m.	Pierce Library	Poster Presentation	Brian Sather
Smith, Forrest	1:00 p.m. - 1:25 p.m.	Badgley Hall 148	Talk	Kevin Roy
Soderberg, Erin	12:00 p.m. - 12:25 p.m.	Badgley Hall 144	Talk	Nicole Howard
Spears, Emily	12:00 p.m. - 12:50 p.m.	Simmons Gallery	Poster Presentation	Kyle Pfaffenbach
Spikerman, Donovan	10:00 a.m. - 10:50 a.m.	Simmons Gallery	Poster Presentation	Anna Cavinato
	11:00 a.m. - 11:50 a.m.	Loso Lobby	Poster Presentation	Jeremy Riggle
	12:00 p.m. - 12:25 p.m.	Zabel Hall 256	Talk	Jeremy Riggle
Staebler-Siewell, Brian	10:00 a.m. - 10:50 a.m.	Zabel 2nd Floor	Poster Presentation	Colby Heideman
Stone, Connor	12:00 p.m. - 12:50 p.m.	Loso Hall 117	Panel Presentation	Jodi Varon
Torres Gonzalez, Erica	10:30 a.m. - 10:55 a.m.	Badgley Hall 148	Talk	Kyle Pfaffenbach
Valadez, Carly	12:00 p.m. - 12:50 p.m.	Badgley Hall 148	Panel Presentation	Nancy Knowles
Whitney, Alexandra	12:00 p.m. - 12:50 p.m.	Simmons Gallery	Poster Presentation	Kelly Rice

**Eastern Oregon University**  
**College of Education and Oregon Teacher Pathways**  
**High School Student Poster Presentations**  
**Hoke Union Building, Room 339**  
**10:00 a.m. to 12:00 p.m.**

**McLaughlin High School**

- José ABREGO                      How adolescent sleep patterns affect education
- Abigail BIGGS                      ACE study and Trauma based education
- Connie DURAN                      How being LGBT affects students and college preparedness
- Erika LANDA                      Deficit Thinking
- Ivette LOPEZ                      Test anxiety in elementary students
- Sam MILLER                      Poetry as a literacy tool
- Samantha PENLAND              Dress codes in schools
- Joulin PURECO                      Participation of Latino parents at the high school level
- Brendan SMITH                      How music classes affect education and college entrance exams

**Pendleton High School**

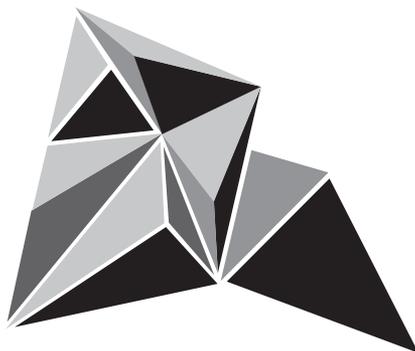
- Zoe FISHEL                      How does childhood PTSD affect academic performance?  
with Jennifer KANNIER
- Jessica FRANKS                      How can teachers gain students respect in the classroom?
- Hunter FRAZIER                      How does year round school affect academic performance?  
with Kiersten MURPHY
- Shelby GREB                      How does student/teacher relationships affect academic performance?
- Alexia MILLER                      How does foster care affect a child's academic performance?
- Logan MILLER                      How does youth substance abuse affect high school drop-out rates?  
with Devon LINDSEY
- Eleanor STUART                      How can educators be more culturally responsive?
- Bethany VAN CLEAVE              Is the quality of education at private schools better than public schools?

### Umatilla High School

- Brenda CAMPOS CORIA The Effect of Systemic Racism on Student Performance
- Steven EBKER How does culturally responsive teaching impact success?
- Cristian MADRIGAL Should High School Start Later?
- Armando MENDOZA How does poverty affect physical education in students?
- Daniel SILVERIO Should High School Start Later?
- Monica-Lisette SOLIS How does Child Abuse Affect Student Performance and Behavior?

### Vale High School

- McKay BENNETT Are Children in Foster Care at a Greater Disadvantage Academically Than Children Not in Foster Care?
- Nathaly GARCIA Racial Inequalities in the U.S. Educational System
- Alex HYDE Sleep and Teens: How much is enough?
- Claribel MUNOZ Minorities in STEM



*The Spring Symposium Committee wishes to thank Jessie Orduno, a senior in our Art Program for his creation of a new logo for Spring Symposium.*

### Symposium Planning Committee 2016:

- |                                |                   |
|--------------------------------|-------------------|
| Dr. Kelly Rice, Chair          | Dr. Nancy Knowles |
| Dr. Kyle Pfaffenbach, Co-chair | Mr. Michael Sell  |
| Ms. Molly Burke, Coordinator   | Dr. Amy Yielding  |
| Dr. Colby Heideman             | Dr. Shaun Cain    |

### The Symposium Planning Committee thanks the following for their valuable contributions of time and energy to this event:

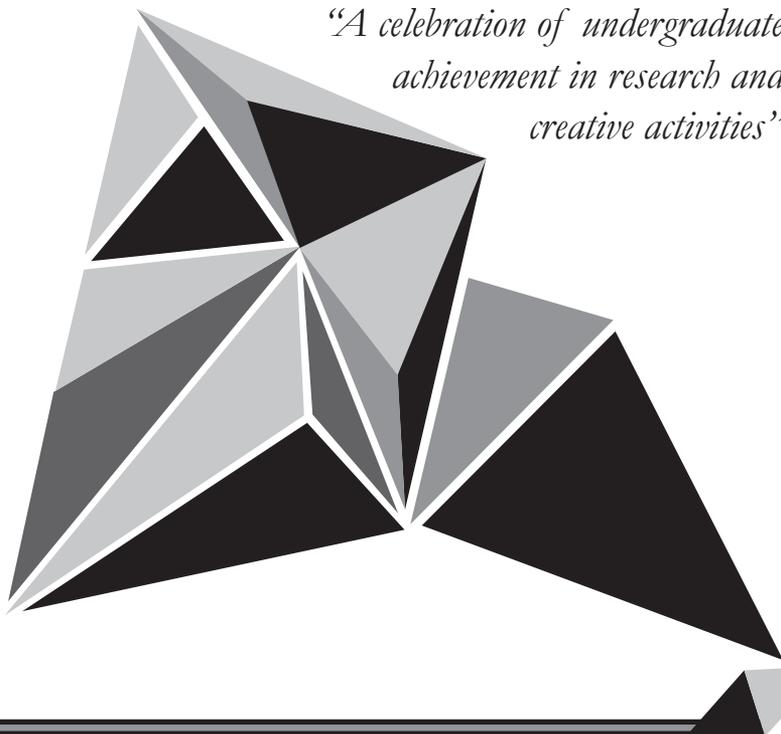
- |                          |                             |
|--------------------------|-----------------------------|
| Mr. Tom Insko, President | Mr. Gibb Pollard            |
| Dr. Sarah Witte, Provost | Ms. Pat Hinton              |
| Ms. Karyl Kramer         | Chef Kris Raasch            |
| Ms. MJ Heather           | & the Sodexo Catering Staff |

The committee appreciates all the effort and support of the faculty sponsors, and all those that promote excellence in scholarly activities that extend beyond the classroom.

# Spring Symposium

**Wednesday, May 18, 2016  
Eastern Oregon University  
presents the Seventeenth Annual  
Spring Symposium**

*“A celebration of undergraduate  
achievement in research and  
creative activities”*





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