



CELEBRATION

OF STUDENT RESEARCH AND CREATIVITY

SPRING 2018





TABLE OF CONTENTS

Letter from the President.....	1
Letter from the Provost	2
2018 Schedule of Events	3
Artistic Presentations.....	4
Oral Presentations	5
Interactive Presentations.....	7
Poster Presentations.....	7
Index of Student Participants	30
Index of Faculty Sponsors.....	32
Conference of Honors Schedule	33-35
Special Thanks and Sponsors	36

PHOTOS – Christine Curran and NKU Photographer, Timothy D. Sofranko

This publication was prepared by Northern Kentucky University. NKU is an affirmative action/equal opportunity institution. MC180158



LETTER FROM THE PRESIDENT

To Our Celebration 2018 Participants and Guests:

Welcome to Northern Kentucky University's annual Celebration of Student Research and Creativity, and congratulations to the students and faculty members participating this year. To our guests and visitors, thank you for joining us and supporting our students and our University.

This is our 16th year celebrating outstanding undergraduate and graduate research and creativity on our campus, and we are proud that the event has grown to become one of our premier annual academic activities.

Student research and creative work are important because they contribute to our knowledge, and these projects enable our students to apply what they learn in the classroom. This transdisciplinary, active learning is a defining feature of our University as we continue to develop service-learning courses, internships, co-op experiences, and opportunities for student research.

The student work we celebrate this week was done under the direct guidance of faculty mentors. These working relationships develop students' critical thinking and analytic skills, as well as oral and written communication skills needed to present their work. They also nurture the deep intellectual bond between our faculty and students – a core value of an NKU education.

The work you will see this week exemplifies the quality of the undergraduate research being conducted at NKU. Our students are future leaders in the development of the intellectual infrastructure of the Commonwealth. Their talent gives me great faith in the future of our region, our state, and our country.

Again, congratulations to all whose work is showcased in this year's Celebration, and many thanks to all who have helped make this week very memorable.

Sincerely,

A handwritten signature in black ink that reads "Gerard A. St. Amand". The signature is written in a cursive, flowing style.

Gerard A. St. Amand
Interim President



LETTER FROM THE PROVOST

Dear Celebration Participants,

It is my great pleasure to welcome you to the Northern Kentucky University 2018 Celebration of Student Research and Creativity!

This year's event continues the remarkable tradition of outstanding scholarly and creative work produced by NKU students under the guidance and mentoring of the faculty. The Celebration of Student Research and Creativity is a wonderful opportunity for our students to display their work through poster presentations, oral presentations, interactive demonstrations, performances, and exhibits of artistic work with the campus community. The continued growth in the number of participants each year is a true testament to the dedication of our students and faculty.

The Celebration of Student Research and Creativity provides evidence of the close connection between students and faculty that has become a hallmark of the NKU educational experience. These opportunities enhance student learning via intense engagement and discovery in a chosen academic field. The work is challenging. Research takes time and effort, but the rewards of this form of experiential learning can be tremendous.

On behalf of Interim President Gerard St. Amand, the deans of our colleges, the chairs of our academic departments, and the entire NKU community, I congratulate you all on the research and creativity showcased during this annual celebration.

Sincerely,

A handwritten signature in black ink that reads "Sue Ott Rowlands". The signature is fluid and cursive.

Sue Ott Rowlands

Provost and Executive Vice President for Academic Affairs

CELEBRATION OF STUDENT RESEARCH AND CREATIVITY

2018 SCHEDULE OF EVENTS



TUESDAY, APRIL 10

9:00-10:00 a.m.	Oral Presentations/Jenny Marsh (HIS) & Dustin Brown (HIS) - SU 106
10:00-11:00 a.m.	Oral Presentations/Jennifer Brooks (BIO) & Hannah Gilreath (BIO) - SU 106
11:00 a.m.-12:00 p.m.	Oral Presentations/Zaria Elery (BIO) - SU 106
12:30-2:45 p.m.	MAIN POSTER SESSION - SU Ballroom - SU 108, 109, 104
12:30-1:30 p.m.	SOTA Dancers - SU 104
12:30 p.m.	Chamber Piano - Fine Arts Building
1:00-4:00 pm	Literary Open Mic/Loch Norse Magazine - SU 102
1:00-2:00 p.m.	Oral Presentations/Cody Moore (CHE) - SU 106
1:40-2:55 p.m.	Philharmonic Orchestra - Greaves Concert Hall
2:00-2:50 p.m.	Musical Theatre Troupe - SU 104
2:00-3:00 p.m.	Oral Presentations/Donna Odhiambo (CHE) & Lauren McMullen (BIO) - SU 106
3:00-3:50 p.m.	Dance Troupe - SU 104
3:00-4:00 p.m.	Oral Presentations/Emily Eaton (ENG) & Molly Weigel (ENG) - SU 106
4:00-5:00 p.m.	Oral Presentations/Zoe Brooks-Jeffiers (ENG) & Ruth Horstman (ENG) - SU 106
5:30-7:30 p.m.	EVENING POSTER SESSION - Eva G. Farris Reading Room, Steely Library

WEDNESDAY, APRIL 11

10:00-11:00 a.m.	Oral Presentations/Jamison Burchett (CHE) - SU 106
11:00 a.m.-12:00 p.m.	Oral Presentations/Chad Dunbar (HIS) & Amanda Brandner (HIS) - SU 106
12:00-1:00 p.m.	Oral Presentations/Nicole Clay (HIS) & Zoe Waldrige (COM) - SU 106
12:00-12:50 p.m.	Chamber Choir - SU 104
1:00 p.m.	SURCA Awards Performance - SU 105
1:00-1:50 p.m.	String Chamber Ensemble - SU 104
2:00-2:50 p.m.	Playwrights - SU 104
2:00-3:00 p.m.	Oral Presentations/Charlotte Kalfas (ENG) - SU 106

THURSDAY, APRIL 12 - FRIDAY, APRIL 27

M-F 9:00 a.m. - 9:00 p.m.	BFA Senior Exhibitions - SOTA Galleries
---------------------------	---

THURSDAY, APRIL 12

5:00-7:00 p.m.	BFA Senior Exhibitions Reception - SOTA Galleries
7:00 p.m.	Faculty Jazz (\$) - York Street Café; Newport, KY

FRIDAY, APRIL 13

1-2:30 p.m.	Electronic Media and Broadcasting Film Festival - Griffin Hall Digitorium
-------------	---

WEDNESDAY, APRIL 18

7:00 p.m.	Concert Band & Symphonic Winds (\$) - Greaves Concert Hall
-----------	--

WEDNESDAY, APRIL 19 - SUNDAY, APRIL 29

W-Sa 7:30 p.m.; Su 2:00 p.m.	Kiss Me, Kate (\$) - Corbett Theatre
------------------------------	--------------------------------------

SATURDAY, APRIL 21

2:00 p.m.	Prep Private Lesson Recital - Greaves Concert Hall
4:30 p.m.	Prep Dance Spring Showcase - Greaves Concert Hall

SUNDAY, APRIL 22

2:30 p.m.	Youth Symphony Orchestra - Greaves Concert Hall
4:30 p.m.	NKU String Project Spring Concert - Greaves Concert Hall

MONDAY, APRIL 23

7:00 p.m.	Steel Band - Greaves Concert Hall
-----------	-----------------------------------

TUESDAY, APRIL 24

7:00 p.m.	Philharmonic Orchestra (\$) - Greaves Concert Hall
-----------	--

THURSDAY, APRIL 26

7:00 p.m.	Spring Choral Concert (\$) - Greaves Concert Hall
-----------	---

FRIDAY, APRIL 27

8:00 p.m.	Opera Workshop - "All Bernstein" (\$) - Greaves Concert Hall
-----------	--

FRIDAY, MAY 11 - SATURDAY, MAY 12

7:00 p.m.	Prep Mainstage Musical Theatre Co.- Bye Bye Birdie YPE (\$) - Corbett Theatre
-----------	---



(\$) indicates a cost for admission



ARTISTIC PRESENTATIONS

A-1: DIGITAL CINEMA SHORT FILMS FROM THE EMB 424 DIGITAL CINEMA PROJECTS AND TAR 316 ACTING SEMINAR PARTNERSHIP

College Movie Festival

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: The 2018 College Movie Festival features five movies created by NKU students, four are live action, one is animation. An annual celebration and competition between Cincinnati area universities and media schools, this year twenty filmmaking teams created short movies over a month-long process. In addition to producing these films, student filmmakers networked with and were advised by local filmmaking professionals.

A-2: EMB 424 DIGITAL CINEMA PROJECTS AND TAR 316 ACTING SEMINAR PARTNERSHIP

Pick Up, Covalence, and Bare

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: *Pick Up*: A college student finds out in the worst way possible that her boyfriend has a dark secret when he overdoses on heroin; *Covalence*: The bonds we form with our friends can be broken; *Bare*: When perfection in performance is demanded someone is going to crack. The goal of this assignment was to take a short script written by the EMB 450/ENG 431/TAR 482 Screenwriting class, cast it with actors from Acting Seminar, plan all aspects of preproduction, and shoot the films on campus within two weeks. The finished edit was complete two weeks later.

A-3: DAVID CRAMER

Roulette

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: Eight friends gather for an intimate dinner party; seven will make it to dessert. This short film was created as the final project for the EMB 424 Digital Cinema Projects and TAR 316 Acting Seminar partnership. The goal of this capstone assignment was to create a short film that was larger in scale and deeper in quality than our previous assignments. After reviewing script submissions from screenwriters across the country, we optioned a script and wrote an adaptation that fit our needs. The film was cast with actors from the Acting Seminar class. The scale

was raised by choosing a great location, and adding production value with costumes, props, and set decoration.

A-4: SAM STEPHENSON

Cake

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: A normal day at the office turns into a mystery when a birthday cake appears in the break room. This movie was produced in the fall 2017 partnership between EMB 424 Digital Cinema Projects and TAR 316 Acting Seminar. A script written for screenwriting was adapted to add six additional characters and five more pages of action. Once the script was finalized the pre-production process of location scouting, blocking scenes, and especially creating prop cakes for the climax of the film took place. One of the biggest challenges for this film was assuring the unique tone was accomplished through all aspects of the production, from acting to set design to lighting.

A-5 WILLIAM MILLIGAN

Painting with Light: Hand Crafting Glass Theatrical Gobos

FACULTY SPONSOR(S): MICHAEL HATTON, THEATRE & DANCE

Abstract: Glass gobos are a stunning tool for theatrical lighting design, but are often cost prohibitive for small educational and community theatre programs. Using materials easily available through retail and commercial outlets and accessible techniques from allied artistic fields, custom glass gobos that lend greater artistic control to the designer can be produced at a fraction of the retail cost.

A-6 LIZZIE LOTTERER, MATTHEW NASSIDA

Carrie: The Musical

FACULTY SPONSOR(S): BRIAN ROBERTSON, THEATRE & DANCE; JAMEY STRAWN, THEATRE & DANCE

Abstract: We developed and produced a student-led production of *Carrie the Musical*. The process included students in every aspect: directing, choreographing, producing, designing, and performing. Our production highlighted themes of bullying and school violence, topics that are rarely discussed onstage. Examining these themes through the dialogue, lyrics, and musical components created an impactful conversation with the students involved in the production and the entire department. Today, some of the cast will be performing a musical number from the show.



ORAL PRESENTATIONS

ABSTRACTS ARE LISTED BY DEPARTMENT OF THE FIRST FACULTY SPONSOR.

O-2 HANNAH GILREATH

Endophytic Fungi and its Potential Use in Antibiotic Drugs

FACULTY SPONSOR(S): JOHN CARMEN, BIOLOGICAL SCIENCES; MICHAEL GUY, CHEMISTRY

Abstract: The discovery of novel antimicrobial products has become critical to maintaining our ability to treat infectious diseases. Our goal was to isolate antimicrobial-producing endophytes. Plant samples collected from the Greater Cincinnati Tri-State area yielded 70 isolates. We tested each endophyte for antimicrobial activity using co-culture assays with bacterial (*Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Klebsiella pneumoniae*) and fungal (*Candida albicans*, *Candida glabrata*, *Candida krusei*, *Candida tropicalis*) pathogens. We identified active isolates using 16s rRNA gene sequencing and spore slides. Five isolates exhibit antifungal activity. Liquid extractions are being prepared to determine the active compounds from these organisms.

O-3 JENNIFER BROOKS, DAISY DIVITA, HANNAH SIZEMORE, AND KORY STUESSEL

The Effect of tRNA Modifications on Pseudohyphal Growth in Yeast

FACULTY SPONSOR(S): JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: Many fungi that infect humans and their crops shift form during infection. Previous studies suggest that tRNA modification enzymes required to modify position 34 of multiple tRNAs are required for morphogenesis. We deleted *ELP1*, a gene encoding one of these enzymes, from the genome of *S. cerevisiae* to study its role in fungal morphogenesis. When compared with wild type yeast, the mutant exhibits increased sensitivity to isobutanol. Preliminary results suggest it also has a decreased ability to grow pseudohyphally. Experiments are currently underway to confirm this observation and to determine which modified tRNA is required for pseudohyphal growth.

O-4 ZARIA ELERY

The Effects of Elongator Complex Subunits on Pseudohyphal Growth

FACULTY SPONSOR(S): JOHN CARMEN, BIOLOGICAL SCIENCES; MICHAEL GUY, CHEMISTRY

Abstract: *Saccharomyces cerevisiae* undergo a reversible switch from a single cell budding yeast form into a hyphae form that allows the cells to invade the agar. Based on the results of large scale mutant screens, we hypothesize that the regulation of this shift is linked to tRNA modification by the Elongator complex. This complex is required for modification of wobble nucleosides in tRNA. We deleted *ELP2* and *ELP3* and are testing the ability of the mutants to shift from yeast to pseudohyphal growth. Future work includes studying tRNA modification in pathogenic yeast.

O-5 LAUREN MCMILLEN

E. coli Levels at AJ Jolly Lake

FACULTY SPONSOR(S): KRISTY HOPFENSBERGER, BIOLOGICAL SCIENCES

Abstract: The purpose of this research project was to obtain the levels of *E. coli* and total coliform in AJ Jolly Lake and its tributaries to see if they were at acceptable levels for further recreational use. The *E. coli* levels must be lower than 130 cfu/100mL (geometric mean) and not exceed 240 cfu/100mL in 20% or more of all samples taken during a 30-day period (KYLRC 2017). Water quality analysis were conducted to monitor these

levels throughout most of 2017. Results showed levels of *E. coli* under acceptable limits, except five individual samples.

O-6 JAMISON BURCHETT, REGAN BALES, MAGGIE THOMAS, AND JUSTEN MAMARIL

Using RNA Interference to Identify the acp3U tRNA Modification Enzyme in Higher Eukaryotes

FACULTY SPONSOR(S): ; MICHAEL GUY, CHEMISTRY

Abstract: Cellular enzymes form dozens of post-transcriptional tRNA modifications to increase tRNA stability and function. The enzyme responsible for the 3-(3-amino-3-carboxypropyl) uridine (acp3U) modification found in animals is unknown. To identify the acp3U enzyme in animals, candidate fruit fly genes that are also found in humans, but not in yeast, are being silenced by double stranded RNA (dsRNA) treatment. RNA from these cells is then analyzed by primer extension to a specific tRNA to determine if acp3U is present after dsRNA treatment. Because acp3U blocks primer extension, knockdown of the responsible gene will result in loss of the primer extension block.

O-7 DONNA ODHAMBO

A Computational Study of Fluoxetine's Absorption and Emission Spectra

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Fluoxetine is one of the most popular SSRI antidepressants in use. With its increasing global usage, fluoxetine is also of growing concern in aquatic toxicology because of its appearance in natural waters. UV photolysis is a possible remediation route. To understand fluoxetine's interactions with UV light, the excited state energies and geometries of several enantiomeric conformers of fluoxetine were calculated with TDDFT to determine if there are differences between the structures and their photophysical behavior. Calculated absorption spectra for the enantiomers agree well with experiment, but fluorescence spectra do not, possibly because of solvent effects.

O-8 CODY MOORE

Investigating Thiol-Functionalized Organoclays as Adsorbents for the Recovery of Toxic and Endangered Metal Element

FACULTY SPONSOR(S): ISABELLE LAGADIC, CHEMISTRY

Abstract: For over a year, our group has focused on an important issue in modern-day society: the reclamation and recycling of toxic and scarce, "endangered" metals. Prepared via a single-pot sol-gel reaction, our thiol-functionalized organoclay material, known as Mg-MTMS, has shown results for the adsorption of aqueous silver(I) and lead(II) ions, at 894.4 milligrams and 592.4 milligrams per gram of Mg-MTMS, respectively. Both metals showed fast adsorption, with over 90% of ions removed in 2 hours. Subsequent stripping of each metal resulted in 94.34% of silver and 87.99% of lead being removed, resulting in the regeneration of the adsorbent.

O-10 ZOE WALDRIDGE

Momma: Managing the Mother- Daughter Relationship Alongside Mental Illness

FACULTY SPONSOR(S): JESSIA KRATZER, COMMUNICATION

Abstract: Using my firsthand experiences with my mother during childhood and emerging adulthood, this paper explores the already stressful mother- daughter relationship and how that communicative environment is further exasperated by the complexities of issues of mental health. This paper also explores the social construction of motherhood and daughter-hood when either person is unable to fulfill the role traditionally held within the relationship due to their mental health status.

O-11 CHARLOTTE KALFAS AND ZORADA PORTER***The Michael Field Diaries: Life-Writing as a Lens into the Fin-de-Siècle***

FACULTY SPONSOR(S): ANDREA GAZZANIGA, ENGLISH

Abstract: Fin-de-siècle poet and dramatist Michael Field (the pseudonym of Katherine Bradley and Edith Cooper) kept a joint diary for over 30 years. For the first time, a team of international scholars, including 5 undergraduates from NKU, is working together to transcribe and annotate the manuscripts of these diaries to create "The Online Diaries of Michael Field" digital archive, launching in early 2018. Through our work on this project, we have a new appreciation and understanding of how these diaries are an invaluable scholarly tool for unlocking the fin-de-siècle as a time of interest for religious, literary, gender, and queer studies.

O-12 RUTH HORSTMAN***A First-Hand Look into Cincinnati's Anti Slavery Social Circle***

FACULTY SPONSOR(S): ROBERT WALLACE, ENGLISH

Abstract: Mrs. Ruth Schneider is a fictitious first-person narrative of a woman who was active in the anti-slavery social circle in Cincinnati during the antebellum and Civil War years. She is a creation of multiple women learned about from original letters, period newspaper archives, National Park Service resources, and NKU class content. She helps organize the anti-slavery conventions that bring speakers like Frederick Douglass and Lucy Stone to town. From her house in Mount Auburn she arranges clothing drives. Even after tragedy strikes her life, more than once, she reaches out to help the community.

O-13 ZOE BROOKS-JEFFIERS***Margaret Garner in the Face of Women***

FACULTY SPONSOR(S): ROBERT WALLACE, ENGLISH

Abstract: For this project, I wanted to focus on the women throughout history that have pushed civil rights and women's rights forward. I decided to have my main focus be Margaret Garner, whom I believe was one of the first main sparks that lit the fire of a revolution in these areas. I included both pictures and texts of people such as Maya Angelou, Michelle Obama, Sojourner Truth, and even students from NKU. They were and are a force to be reckoned with throughout history; they have altered the course of women and black rights for the better.

O-14 EMILY EATON***Sculpture of Margaret Garner as Daphne***

FACULTY SPONSOR(S): ROBERT WALLACE, ENGLISH

Abstract: When I created my ceramic piece of Margaret Garner, I decided to form her into a tree to reference Daphne running from Apollo. Garner was an enslaved woman compelled to kill and injure her children because of her victimization as a slave and as a way of protecting her children from similar victimization. The most famous piece of art about Garner is The Modern Medea, which I believe is an inappropriate title for her. Medea killed her children because of vengeance. I think it is more appropriate to compare Garner to Daphne because they were both victims.

O-15 DUSTIN BROWN***Triremes and Tyrants: A Carthaginian Story***

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY

Abstract: "Et tu, Brute" exclaims a thespian – adorning the attire of Julius Caesar. "This is Sparta" decries another. Much is known of the antiquities when producing a film or play. Likewise, much is taught in modern textbooks on ancient Rome and Greece, yet little is known about many of the surrounding powers of the world and their great stories. Many know of the Great successes of the Roman Empire or the political significance of the Greek nation states. However, between the two lay another, one nation

of prominence, power, and ingenuity. That nation is Carthage, and this is its story.

O-16 AMANDA BRANDNER***Homo Erectus and Homo Sapiens Interaction and Influence in Ancient China***

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY

Abstract: Homo erectus were well established in ancient China since approximately 750,000 BCE and were a thriving species but their way of life and even survival was about to be threatened. Out of Africa a new species of humans was coming, and the interaction between them and homo erectus would change both species. Homo sapiens 100,000 and 50,000 years ago interacted with Homo erectus. Evidence from the excavation at Hsuechiayao in 1976 proved that these two species of humans interacted and even reproduced. The interactions between homo sapiens and homo erectus influenced both species in profound ways.

O-17 CHAD DUNBAR***Smallpox, Hut Taxes, & Indigenous Revolts in Southern Africa: Socio-Economic Catalysts behind Colonialist Conquest***

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY

Abstract: A historical analysis of the socio-economic consequences arose from the intersection of smallpox epidemics, hut taxes, and international financial crises, which culminated in a series of colonialist conquests and indigenous revolts in Southern Africa during the 18th, 19th, and 20th centuries. Smallpox outbreaks spread from European sailors and settlers resulted in the widespread breakdown of Khoikhoi economic capacity, cultural capital, social cohesion, and thus political sovereignty. The hut taxes imposed by British colonialists directly correlated with international economic crises and panics, which in turn limited Britain's financial support for its African colonies during these times; hence, taxes were introduced.

O-18 JENNY MARSH***Roebling's Masterpiece: The Ohio Bridge***

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY

Abstract: This presentation details the history of the John A. Roebling Suspension Bridge and the men responsible for bringing the historical and massive construction project to the Covington and Cincinnati area. It includes biographical information on the architect, master carpenter/mechanic, and financial details of the bridge project. This report was in response to the sesquicentennial celebration of the John A. Roebling Suspension Bridge in 2017.

O-19 NICOLE CLAY***The Forgotten Women of the Irish Revolution***

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY

Abstract: In 1916, Europe was embroiled in a war like none before, and in the background, a rebellion reached its boiling point. This rebellion burst to life on Easter Monday in the bustling city of Dublin, Ireland. The backbone of this rebellion emerged from an uncommon material for the time: women. This presentation explores the role of women in the Irish rebellion and how they have been excluded from most popular history.

O-20 MOLLY WEIGEL***Exploring the Lives of Enslaved Women in the 1800's***

FACULTY SPONSOR(S): ROBERT WALLACE, ENGLISH

Abstract: In the 1800's, an enslaved woman had no control over her life – slave masters had the ultimate power over the bodies of their property and benefited two-fold from having relations with their slaves. Offspring of these rapes became the master's property, increasing his wealth and prosperity. Moreover, slave mothers were emotionally destroyed, feeling isolated from all

those around them. Margaret Garner, an enslaved woman from Kentucky, was one such victim who chose to forcefully take her daughter's life to save her from the continuing despair. My podcasts focus on the daily lives and mistreatment of women during this time.

O-21 DIADO A. DIOL

Freedom of the Press in the Latin America Region

FACULTY SPONSOR(S): RYAN SALZMAN, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Freedom of the press is essential to having a full democracy. This paper identifies how a state is unable to be a full democratic state without the characteristic of a free press. Chile, El Salvador, and Venezuela are the countries selected for this case study, using data retrieved from Freedom House to measure and compare press freedom in each of the countries. Findings indicate that even democratic regimes face free-press issues. The Latin American region would have to overcome many obstacles in order to have a free press and a less flawed democracy.

INTERACTIVE PRESENTATIONS

I-1 HANNAH BARKER, DILLON MCMAIN

Theory of Affirmative Rewards

FACULTY SPONSOR(S): ALEXIS PULOS, COMMUNICATION

Abstract: We had to create a theory that not only applied to our lives, but also connected to a phenomenon that was happening in our society. It also had to meet the criteria of what makes a communication theory. The phenomenon is self-validation through others on social media, such as Instagram. For the most part, we want instant responses. If we get enough likes or positivity, we post more and re-post the same thing. If we do not, we contemplate on taking it down. If it stays, we start to develop our profiles and get that self-validation we seek every day.

I-2 AARON WICKMAN

The String Project

FACULTY SPONSOR(S): SOOKYUNG CHO, COMMUNICATION

Abstract: The goal of The String Project is to provide a platform to assist in the process of learning string instruments through an interactive user interface. The String Project strives to accelerate this process as well as act as an interface for its users to communicate through and share in a space built around the premise of music instead of merely providing support for it as a secondary functionality.

I-3 RHETT MCCARTY

FACULTY SPONSOR(S): SOOKYUNG CHO, COMMUNICATION

Abstract: I plan to show off the design process and the final product. The product will be a portfolio website containing an interactive 3D museum. The museum will contain some of my 3D models I designed. I will show the steps in my design process, what programs I used, and also hopefully show the finished product. This will hopefully showcase the Media Informatics' amazing 3D and interactive web design department.



POSTER PRESENTATIONS

ABSTRACTS ARE LISTED BY DEPARTMENT OF THE
FIRST FACULTY SPONSOR

P-1 SHELBY DIENER

Impact of Problem-Based Team Learning on the Grades of Students with Known Risk Factors Enrolled in a Genetics Course

FACULTY SPONSOR(S): BETHANY BOWLING, BIOLOGICAL SCIENCES

Abstract: Students with risk factors are predisposed to receiving a D or F grade or withdrawing from a course. Those risk factors are: being a first-generation college student, coming from a low-income family, and/or identifying as an under-represented minority. To attempt to lessen the negative impact that risk factors present, problem-based team learning (PBT), which increases student engagement and teamwork, was introduced to the genetics course at NKU in Fall 2013. The percentage of students with known risk factors who received a D, F, or W grade in the course were compared in the semesters before and after PBT was implemented.

P-2 JUNESEA LANADA

The Effect of Benzo[a]pyrene on Motor Function in Neonatal Mice

FACULTY SPONSOR(S): CHRISTINE PERDAN CURRAN, BIOLOGICAL SCIENCES

Abstract: Benzo[a]pyrene (BaP) is a carcinogen found in cigarette smoke, vehicle exhaust and grilled food. Recent studies monitoring pregnant women and their children revealed that high exposure to polycyclic aromatic hydrocarbons such as BaP affect the developing brain and lower IQ. We used mice that model human genetic variation and examined motor function and reflexes during the first two weeks of life. We found significant differences in the righting reflex test on P7 and in negative geotaxis on P10 and P14. Surprisingly, BaP exposed mice had longer latencies in negative geotaxis on P10, but significantly shorter latencies on P14.

P-3 YISLAIN VILLALONA

Gene Expression Differences in Neonatal Mouse Brain after Developmental Exposure to Polychlorinated Biphenyls Dependent on Ahr and Cyp1a2 Genotypes

FACULTY SPONSOR(S): CHRISTINE PERDAN CURRAN, BIOLOGICAL SCIENCES

Abstract: Polychlorinated biphenyls (PCBs) are persistent organic pollutants linked to neurological deficits in children exposed during early brain development. Previously, we found differences in the aryl hydrocarbon receptor and CYP1A2 affect susceptibility to PCBs. Here, we report gene expression changes in two brain regions. High-affinity AhrbCyp1a2(-/-) mice had increases in the aryl hydrocarbon receptor repressor and CYP1A1 in the cerebellum. Poor-affinity AhrdCyp1a2(-/-) mice had significant increases in fibroblast growth factor-2 and estrogen receptor alpha., insulin-like growth factor-1 and ryanodine receptor-3 and a 6-fold decrease in expression of Purkinje cell protein-2 (Pcp2). The greatest differences in the cortex were in AhrbCyp1a2(-/-) mice.

P-4 RACHEL CONAWAY

The Function and Consequences of Atp13a1 Gene Loss in Mouse Brain Development

FACULTY SPONSOR(S): CHRISTINE PERDAN CURRAN, BIOLOGICAL SCIENCES

Abstract: In humans, the ATP13A1 gene is linked to normal development of the nervous system. ATP13A1 is developmentally regulated, and its expression is highest during early embryonic development when neurogenesis is occurring. The homozygous knockout of Atp13a1 is embryo lethal in mice. The goal of this project is to determine if supplementation during gestation

can rescue the knockout pups and to characterize the cognitive function of heterozygous Atp13a1(+/-) compared to wild type mice. We will also analyze gene expression data from wild type and Atp13a1 (-/-) fetuses in an attempt to identify pathways affected when the gene is lost.

P-5 GRETA LOWE, JUNESEA LANADA, TAMIKA CHAPPELL, LISA MASSIE, SHELBY CAUDILL

The Effects of Gestational and Lactational benzo[a]pyrene Exposure on Learning and Memory in Two Genotypes of Mice

FACULTY SPONSOR(S): CHRISTINE PERDAN CURRAN, BIOLOGICAL SCIENCES

Abstract: Polycyclic aromatic hydrocarbons (PAHs) are a major component traffic-related air pollution, cigarette smoke and produced during baking and grilling food. They are a risk factor for learning and memory deficits in children exposed in-utero or during early life. We used the prototypical PAH benzo[a]pyrene to determine if there is genetic susceptibility to PAH-induced developmental toxicity. We used a mouse model and two tests of learning and memory. We found no significant differences in Morris Water Maze, but found a trend for significance in the Novel Object Recognize test for treated females.

P-6 DONNIESHA MASON

Immunogenicity of Novel Vaccines for Hepatitis C Virus

FACULTY SPONSOR(S): JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: Hepatitis C virus (HCV) is one of the most prevalent and deadly blood-borne pathogens. No vaccines are currently available to prevent or treat HCV infection. Using recombinant DNA techniques, we developed several novel vaccines for HCV using a modified herpesvirus backbone. Mice were immunized with vaccine DNA alone or vaccine DNA packaged in herpesvirus particles. Most vaccine groups developed HCV-specific antibody after three vaccinations. Mice immunized with vaccine DNA also developed memory T cell responses to HCV. These results demonstrate the immunogenicity of novel HCV vaccines, that may someday be used to prevent HCV infection in man.

P-7 HUNTER MORGAN

Activation of Human Antigen Presenting Cells by Novel Vaccines for Hepatitis C Virus

FACULTY SPONSOR(S): JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: Hepatitis C virus (HCV) is one of the most prevalent and deadly blood-borne pathogens. No vaccines are currently available to prevent or treat HCV infection. Using recombinant DNA techniques, we developed several novel vaccines for HCV using a modified herpesvirus backbone. Human antigen presenting cells exposed to the vaccines demonstrated immune activation and chemokine expression that would attract other immune cells to the site of vaccination. These results demonstrate the immune activating potential of the vaccines, which may someday be used to prevent HCV infection.

P-8 COLIN HARTMAN

Inactivation of Fungal Spores with Heat and UVC

FACULTY SPONSOR(S): JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: This study addressed the inactivation of fungal spores from three different genera (*Fusarium*, *Penicillium*, and *Mucor*). Spore suspensions were exposed to heat or UVC then diluted and plated on sabouraud dextrose agar. Plates were examined for germination and growth for seven days. The results demonstrated clear evidence that heat was an effective way of inactivating fungal spores from these three genera. The procedures and knowledge learned from this project will benefit future research pertaining to medically and environmentally relevant fungi such as one linked to White Nose Syndrome, a fungal disease that is killing bat populations in North America.

P-9 BREANNA BOND***Iroquois Transcription Factors Play an Important Role During Xenopus Pharyngeal Development***

FACULTY SPONSOR(S): EMILY SHIFLEY, BIOLOGICAL SCIENCES

Abstract: During development, pharyngeal arches form bones and cartilage of the head. If the genetic signals guiding development are disrupted, this can cause birth defects. We hypothesized that Iroquois genes were important for pharyngeal development. To test this, we injected morpholinos to block their activity. We analyzed Iroquois loss of function (lof) embryos and found that the shape of the pharynx may be disrupted and certain gene expression patterns are reduced. We also found that Iroquois lof causes craniofacial defects. In the future, we will work to identify how Iroquois genes interact with other genetic signaling pathways to guide pharyngeal development.

P-10 SARAH KUNKLER***FGF and RA Signaling Pathways Interact During Development of the Xenopus Pharynx***

FACULTY SPONSOR(S): EMILY SHIFLEY, BIOLOGICAL SCIENCES

Abstract: The pharynx gives rise to multiple organs including the cartilage of the head and neck, thymus and parathyroid glands. If the pharynx does not develop properly, it can cause birth defects. We hypothesized that the FGF signaling pathway plays an important role in the development of the pharynx. We manipulated FGF signaling in *Xenopus* embryos at various stages. Analysis of the manipulated embryos showed changes in gene expression suggesting that FGF signaling plays a key role. These results will aid in our understanding of the genetic cues that guide pharyngeal development and how disruptions may result in birth defects.

P-11 ALEX AMMERMAN***LTV1 a Component of the EGO/GSE Complex and a Mediator of Genomic Instability***

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: The aim of this research is the investigation of genes of interest within the TOR (Target of Rapamycin) pathway and their impact on genome stability. The TOR pathway is a central regulator of cellular growth and is highly conserved from yeast to humans. The genes under investigation in this project comprise a subunit of TOR termed the EGO/GSE complex which include: EGO1, EGO3, GTR1, GTR2, TCO89, CDC60, VAM6, and LTV1. LTV1 homozygous knockouts were found to significantly increase genomic instability. LTV1 is known to mediate cell membrane protein recycling as well as ribosomal small subunit export from the nucleus.

P-12 SAMUEL KOCH***Sex Differences in Fecal Sac Removal from Carolina Chickadee (*Poecile carolinensis*) Nests***

FACULTY SPONSOR(S): LINDSEY WALTERS, BIOLOGICAL SCIENCES

Abstract: Parent songbirds keep their nests clean by removing nestling waste in the form of fecal sacs. The goal of our research was to determine whether there were differences in fecal sac removal rates between male and female Carolina Chickadees (*Poecile carolinensis*). We recorded both number of fecal sac removals per sex and per nest visit for each sex. Our results showed that male chickadees remove more fecal sacs, but only because they visit the nest box more frequently.

P-13 DONALD DAVIS***AWS JAMS : Just Another Messaging Service***

FACULTY SPONSOR(S): WEI HAO, CENTER FOR APPLIED INFORMATICS

Abstract: In the project, I will use Amazon Cloud to build an Instant messaging environment that meets availability, scalability

and performance requirements. The system will utilize EC2, ELB, Auto Scaling, and CloudFront technologies. There are several open source instant messaging projects that support these technologies. Tigase, Openfire, AstraChat or Skype for Business will be used as the instant messaging service. The project will contain a minimum of 2 Instant messaging servers and two SQL databases to ensure high availability.

P-14 SARAH SKINNER***2017 Center for Applied Informatics Annual Report***

FACULTY SPONSOR(S): JILL HENRY, CENTER FOR APPLIED INFORMATICS

Abstract: The 2017 CAI Annual Report showcases the innovative student achievements, projects, and events occurring during the year. Working with designs from Kate Ledermeier, I refined the designs, gathered and arranged the copy, readied the document for print, and implemented changes to the layout that were specified by the team. The layout this year incorporates a new branding direction for the COI – strong angles, bold use of colors, and tessellated triangular patterns. The 18 page report not only accomplishes its purpose but is also focused and visually engaging. Overall the concise, balanced nature of the content provides a trustworthy metric.

P-15 LIAM TIEMON***E-Commerce Baseball***

FACULTY SPONSOR(S): JILL HENRY, CENTER FOR APPLIED INFORMATICS

Abstract: The Kid Glove Way is a non-profit which takes orders from various baseball organizations such as Knothole and school teams for the purchasing of equipment and supplies. This process is accomplished on paper including price points and order history for the last 25 years. The CAI automated this process to improve workflow and efficiency by building a website using ASP.NET. The website is operational; however, some key features are still being added including combining customer order forms for easy bulk ordering, vendor search for price point comparison, and a budget for customers to see how much they can spend.

P-16 GABE HOWARD***NorseTime***

FACULTY SPONSOR(S): JILL HENRY, CENTER FOR APPLIED INFORMATICS

Abstract: NorseTime is a custom time management and tracking software which tracks project hours and billing services. Previously, project tracking consisted of spreadsheets not allowing for automated billing. Products already on the market either cost too much or did not have flexible features to track student hours around the academic calendar. The web app was built with PHP as the backend with a MySQL database. The app front end was built in HTML/CSS/JS using a few libraries (Bootstrap, JQuery, DataTables) to speed up development. The software allows real-time estimates towards projects assisting in determining the status of active projects.

P-17 MATE VIRAG***Spring Grove Cemetery Tour App***

FACULTY SPONSOR(S): JILL HENRY, CENTER FOR APPLIED INFORMATICS

Abstract: The Spring Grove Cemetery Tour App provides an interactive tour experience guiding visitors through the landscape of Spring Grove Cemetery. Prior to this app, visitors were provided with brochures that outlined different tours and provided written descriptions of every step. We created a mobile application that tracks the user's location and displays the monument in front of the user using Geofencing technology. A map allows the user to follow the tour and as the screen pops up giving a description of each monument, an audio plays. This results in an easy-to-follow and interactive engagement with the historic cemetery.

P-18 DAISY J. DIVITA, CATHERINE L. WEINER, GREGORY O'CONNOR***Functional Analysis of the Trm732 Accessory Protein***

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: Post-transcriptional modifications are crucial for the proper function of tRNA. The 2'-O-methylation of residues 32 (Nm₃₂) and 34 (Nm₃₄) in tRNAs is highly conserved among eukaryotes. In tRNA^{Phe}, Trm7 methyltransferase requires accessory proteins Trm732 and Trm734 to form Cm₃₂ and Gm₃₄, respectively. Although the exact function and binding of these accessory proteins in the methyltransferase reaction is unknown, lack of both proteins causes poor growth in yeast, indicating their importance. To further understand the role of Trm732, yeast mutants were generated and Cm₃₂ levels were quantified using UPLC. The interaction between Trm7, Trm732, and tRNA is being analyzed by immunoprecipitation.

P-19 REGAN BALES***Determination of the Roles of Trm7, Trm732, and Trm734 Orthologs in 2'-O-methylation of Human and Fruit Fly tRNA***

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY; ERIC PHIZICKY, CHEMISTRY

Abstract: Post-transcriptional modifications of eukaryotic tRNA are crucial for proper cellular function. In yeast, the methyltransferase Trm7 is responsible for 2'-O-methylation of nucleotides 32 and 34 (Nm₃₂ and Nm₃₄), which are associated with normal growth. Trm7 requires Trm732 and Trm734 for activity. We aim to determine if Trm7/Trm732/Trm734 orthologs are responsible for Nm₃₂ and Nm₃₄ on tRNAs of higher eukaryotes. To test for the requirement of Trm7/Trm732/Trm734, we are using RNA interference to knock down genes in fruit fly cells from which expression can be determined via quantitative PCR. Additionally, we are purifying specific tRNAs to analyze 2'-O-methylations via mass spectrometry.

P-20 HANNAH SIZEMORE***Determining the Role of tRNA Modifications by the Elongator Complex on Pseudohyphal Growth in Yeast***

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: The yeast *Saccharomyces cerevisiae* is a typically unicellular model organism that can switch to pseudohyphal growth under certain conditions. Modifications of transfer RNAs (tRNAs) are critical for proper cell function and may be linked to the switch from unicellular to pseudohyphal growth in yeast. The elongator complex is highly conserved and modifies residue 34 on many tRNAs, including those in yeast. Yeast with mutations in the elongator complex are defective for pseudohyphal growth. We have generated yeast strains lacking genes, specifically ELP4 and ELP6, from the elongator complex to continue testing the role of tRNA modifications on pseudohyphal growth.

P-21 JULIA ZIEBRO, SARAH SPIGELMYER***Genetic Interactions of Trm732 and Identification of the Trm732 Binding Site on Trm7***

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY; JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: Post-transcriptional modification of tRNAs is critical for their function and is performed by modifying enzymes. Nucleotide 32 on tRNA^{Phe} and tRNA^{Trp} is 2'-O-methylated in yeast and humans by the methyltransferase Trm7. In the yeast *Saccharomyces cerevisiae*, Trm7 requires the accessory protein Trm732. Here we investigate the genetic interactions of TRM732 with 4 candidate genes identified via high-throughput studies to explore the role of Trm732 in the cell. Additionally, we aim to identify the Trm732 binding site on Trm7 by generating and analyzing point mutations in regions identified via sequence alignment.

P-22 MAGGIE THOMAS, ADRIAN R. GUY, JAMIE B. BURCHETT***Identification of the Enzyme Responsible for acp3U tRNA Modification in Bacteria***

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: tRNAs must be modified for proper function, and defects are associated with diseases including cancer. One modification, acp3U, is formed on some prokaryotic and eukaryotic tRNAs by an unknown enzyme(s). To identify this enzyme, *Escherichia coli* strains lacking genes encoding methyltransferases of unknown function were tested for acp3U. Additionally, to identify the enzyme, acp3U formation activity is being purified from *E. coli*. To identify acp3U activity, a primer extension assay utilizing engineered tRNA is used. Identification of the acp3U modification enzyme will allow study of the function of acp3U in tRNA, and may help identify the enzyme in humans.

P-23 JUSTIN RABE, DOMINIC RUWE***Optimization of tRNA Purification for Modification Analysis by LC-MS***

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY; JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: Posttranscriptional tRNA modifications are important for cell health. Defects in tRNA modifications are associated with diseases such as type 2 diabetes and cancer. Our lab's main goal is to identify new enzymes responsible for tRNA modifications in humans. We are developing methods to isolate tRNA for analysis by liquid chromatography and mass spectroscopy (LC-MS), a sensitive and reliable method to quantify modifications. Currently we are using yeast tRNA to determine the minimum amount of tRNA needed to detect modifications using LC-MS. Yeast tRNA is being used as a proof of concept due to analogous modifications found in other eukaryotic cells.

P-24 MICHAEL CRACCHIOLO, BRIANNA PARKS, STEPHANIE SANER, RAJ PATEL, ALEX OLIVAN, AHEARN CEILIDH***Spectroscopic Investigations of Fluoxetine and Progesterone***

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Fluoxetine and progesterone were analyzed via absorbance and fluorescence spectroscopy in a variety of solvents to determine molar extinction coefficients and fluorescence quantum yields. Both compounds have medicinal uses; fluoxetine as an antidepressant, and progesterone in hormone replacement therapy. Both are found at too-high concentrations in surface waters but can be degraded by light. Molar extinction coefficients show how strongly the compound absorbs light, while fluorescence quantum yields describe what the compound does with the energy gained from absorbing light. Both molecules exhibit solvent dependences in their properties, which can be of use in degrading them.

P-25 AYANAV ROY***Discovery of New Heteroaryl Aromatase Inhibitors through Computer Modeling***

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Aromatase inhibitors provide a new approach for breast cancer drug discovery. The purpose of this study was to utilize computer modeling to predict crucial interactions between heteroaryl-containing aromatase inhibitors and the enzyme active site. Heteroaryl aromatase inhibitors block the function of aromatase by preventing the production of estrogen, which stops breast cancer cell proliferation. The program GOLD was used to test the docking scores of the inhibitors and MOE was used to visualize the bonding interactions. There were six promising structures after examining their docking scores: MN-A148, C0-H5, C0-H12, I5-H34, I5-H5 and C0-H40.

P-26 KARA LINDSAY***Palladium-catalyzed C-H Coupling Reactions: Ketone Substrate Scope Study***

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: The objective of this project is to create molecules that are analogues to the isoflavanones, a class of recently identified aromatase inhibitors, an enzyme that inhibits estrogen. Thirteen heteroaryl isoflavanone derivatives were synthesized utilizing a palladium-catalyzed direct heteroarylation reaction. Among the carbonyl substrates which were investigated, esters and β -dicarbonyl ketones did not give the expected products. All the rest carbonyl compounds (aromatic ketones, aliphatic ketones, heteroaryl ketones and cyclic ketones) reacted with heteroaryl halides in the presence of palladium catalysts and NaOtBu. The synthesized compounds were fully characterized by ¹H NMR, ¹³C NMR and HRMS.

P-27 ALEX ROSEN***Synthesis of Isoflavonone Aromatase Inhibitors: Domino Product***

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Breast cancer is one of the leading fatal afflictions in women living in the United States. The goal of the research conducted was to find an isoflavanone analog that could act as an aromatase inhibitor in an effort to treat hormone receptor positive cancers. During previous research, novel compounds (called Domino Products) were found that could have potential as inhibiting agents. This group focused on the synthesis and cataloging of domino products through direct heteroarylation reaction of commercially available ketones. Resulting reactions showed that the placement of the heteroatom on the aryl ring affected the hydration of the product.

P-28 QUYNH NGUYEN***Palladium-Catalyzed Direct α -heteroarylation of Ketones: Unusual Domino Reaction Discovery***

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Heteroaryl functionality plays an important role in medicinal chemistry. Especially, heteroaryl isoflavanone analogs were found in our previous study to be potent aromatase inhibitors, a class of potential anti-breast cancer drugs. This research focuses on ketone and heteroaryl substrate scope investigation for microwave-assisted, palladium catalyzed direct α -heteroarylation reactions under optimized conditions. Over a dozen heteroaryl isoflavanones were successfully synthesized and isolated. An unusual products were discovered during our study - a heteroaryl isocoumarin through a domino sequence. These reactions can be used to construct valuable scaffold which may find their application in biochemistry and medicinal chemistry.

P-29 ANDREW QUILLEN***Heteroaryl Isoflavanone Compounds as Aromatase Inhibitors: Heteroaryl Screening***

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: A palladium-catalyzed direct α -heteroarylation of ketones was studied in this project in order to synthesize heteroaryl isoflavanone analogs as aromatase inhibitors. The major challenges for palladium-catalyzed α -heteroarylation of ketones includes catalyst poisoning multiheteroarylation side products. A combination of different precatalysts/catalysts, ligands and bases was investigated to search for an efficient catalytic system. The reaction conditions were further optimized under microwave irradiation. The optimized condition was used to synthesize over two dozens of heteroaryl isoflavanone compounds. Utilizing NMR technique to monitor the reaction progress, several experiments were carried out to study the reaction mechanisms.

P-30 MATT NEISER***Palladium Catalyzed Heteroarylation***

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Synthesis of heteroaryl isoflavanone products was achieved by using 1.1 equivalents of ketone, 1 equivalent of heteroaryl, 2.4 equivalents of NaOtBu, toluene and XPhos Pd Gen 4. The reaction was microwaved for 20 minutes at 1200 C. There is an interesting set of reactions that works better at room temperature instead of the microwave. A wide variety of aromatase inhibitors were synthesized focusing on changing the heteroaryl substrate and using acetophenone as the ketone. Another set of reactions was done by using 3-iodopyridine as the heteroaryl and changing the ketone substrates.

P-31 SANDRA ONATE***Synthesis and Biological Evaluation of Caffeic Acid Phenethyl Ester (CAPE) Derivatives as Xanthine Oxidase Inhibitors***

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Xanthine oxidase catalyzes the conversion of hypoxanthine to xanthine and of xanthine to uric acid. For decades, XO inhibitors have been used for therapy of hyperuricemia. Hyperuricemia has been linked to cardiovascular and chronic kidney disease and causes gout. In this study, a small library of caffeic acid phenethyl ester (CAPE) derivatives were designed and synthesized as xanthine oxidase inhibitors. Structure-activity relationship analysis in conjunction with molecular docking indicated that the most active XO inhibitors carried a minimum of three hydroxyl groups. These CAPE derivatives may be further explored for their therapeutic values of xanthine oxidase inhibitors.

P-32 REAGEN POWERS***Synthesis of Thiazole Containing Cyclic Peptides as Potential Antifungal Compounds***

FACULTY SPONSOR(S): AMBER ONORATO, CHEMISTRY

Abstract: Natural products are a source of drug discovery and their synthetic challenges often lead to new methodology. Naturally occurring cyclic peptides have been isolated from a variety of sources that contain unique structural features such as modified amino acids in the form ofazole heterocycles. Theseazole-containing cyclopeptides show a variety of immunoregulatory, antibiotic, and cytotoxic activities. The goal of this research is to synthesize thiazole containing cyclic peptides via cyclooligomerization reactions of thiazole modified amino acids. Once the final molecules are achieved, the minimum inhibitory concentrations of these compounds will be determined using standard broth microdilution assays.

P-33 CHIOMA OKORONKWO, ALEX BELLOCQ, SYLVIA CHERVUS, LEXIE CALLAHAM, HEATHER HANDRICH, KIERSTEN EDWARDS, MARCELLUS HOWIE, SAM THEDERS, EMILY VICARS, AUBREY WARPOOL

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY; TRACEY BONNER, THEATRE & DANCE;

Organic chemistry studies carbon-containing compounds and the changes they undergo during reactions. These changes occur molecularly and are difficult to visualize by watching a beaker. Dance studies disciplined movements. This transdisciplinary study explored how dance techniques can aid students' understanding of reaction mechanisms. Each dancer used their motion, position, and connectivity to represent an atom and its changes during mechanism. Changes in conformation, stereochemistry, and regiochemistry were represented, giving a clear mechanism interpretation. The representations were recorded and are being shown in organic chemistry classes. This presentation will show dance mechanism videos including electrophilic addition, acetal formation, and nucleophilic substitution.

P-34 OLIVIA HOUSE***Public Relations Plan and Toolkit for The Newport Business Association***

FACULTY SPONSOR(S): ZACHARY HART, COMMUNICATION

Abstract: During the fall 2017 semester, PRE 394 Topics: Public Relations Practicum, student teams developed public relations plans and a toolkit for clients in Newport, KY. This team created a PR plan and toolkit that will help the Newport Business Association to further its engagement in the community by bringing in more businesses for membership and promoting its new website. The plan outlines several different tactics and strategies, including social media and an event that will help the association achieve the growth it is seeking.

P-35 KELLY CONKLIN, STEPHANIE ALDERSON, DESTINI GOLSBY***Public Relations Plan and Toolkit for Family Promise of NKY***

FACULTY SPONSOR(S): ZACHARY HART, COMMUNICATION

Abstract: During the fall 2017 semester, PRE 394 Topics: Public Relations Practicum, student teams developed public relations plans and a toolkit for clients in Newport, KY. This team created a public relations plan and toolkit for Family Promise, a non-profit organization located in Northern Kentucky. Its mission is to help the homeless and low-income families achieve sustainable independence through community-based response. This team created new tools to help promote future events, gain more volunteers, increase their donations, and enhance Family Promise's image.

P-36 HANNAH SIEFERT, EMILY SCHAEFER, ATLEY SMEDLEY***Public Relations Plan and Toolkit for Wooden Cask Brewing Company***

FACULTY SPONSOR(S): ZACHARY HART, COMMUNICATION

Abstract: During the fall 2017 semester, PRE 394 Topics: Public Relations Practicum, student teams developed public relations plans and a toolkit for clients in Newport, KY. This public relations proposal is geared to increase traffic to the Wooden Cask Brewery tap room, build brand awareness, increase social media presence and build a relationship with NKU. It is intended to attract young adults to Wooden Cask. The plan includes tactics that reach out to the media, create a college night, create a social media plan/guide, develop a brand guide, establish a newsletter, revamp its website, and create an all-inclusive event calendar.

P-37 LYNDSY NOLAND, SYDNEY ROLL, KENNEDY RUEBUSCH***Public Relations Plan and Toolkit for Habitat for Humanity***

FACULTY SPONSOR(S): ZACHARY HART, COMMUNICATION

Abstract: During the fall 2017 semester, PRE 394 Topics: Public Relations Practicum, student teams developed public relations plans and a toolkit for clients in Newport, KY. This plan's goal is to spread awareness about NKU Habitat for Humanity on NKU's campus and in the Northern Kentucky community. Three objectives were created: increasing attendance at the Small Planet Dinner, increasing membership, and increasing donations. Various tools were created to make connections with the Northern Kentucky community and on NKU's campus, specifically Greek Life."

P-38 SAMUEL ROSENSTIEL***Stop Fake News: Combating the Polarization of Americans Based on Misinformation***

FACULTY SPONSOR(S): STACIE JANKOWSKI, COMMUNICATION

Abstract: To combat the spread of "fake news" stories, students developed visual tools and representations of the widening divide between Americans due to polarized news coverage and false reports. Student art symbolizes the harmful effect of disparate coverage on American discourse. Infographics allow viewers to show the spread and effect of false reports, test the truthfulness of news stories through illustrated checks, and

demonstrate how perspectives on news differ. Videos, articles and lesson plans explore the relationship of journalism to society. Students created this media project out of a need for easy-to-use aids and information on the spread of false reports.

P-39 JESSICA FIBBE***Race/Ethnicity and Sociocultural Beliefs and Their Impact on Breastfeeding***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: In America, we continue to see low rates of breastfeeding. Furthermore, there are racial disparities present, with African American women representing the lowest percentage of breastfeeding mothers. The purpose of this study is to explore the relationship between a woman's race and her sociocultural beliefs and how they influence her attitude toward breastfeeding. We expect to see contrasting beliefs and attitudes, offering further explanation to the gap in breastfeeding rates. The proposed method of study is through the use of surveys and follow-up interviews with women to analyze any correlations between their sociocultural beliefs and their attitudes toward breastfeeding.

P-40 ROSE PENDLEY, JOSH WILLIAMS***The Influence of On-Campus Involvement on College Students' Social Media Networks***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: College campuses across the United States are home to thousands of student organizations. Not only does student involvement in on-campus organizations positively impact the overall college experience, it also increases students' networks. In the ever evolving digital world, the role of online networks has never been more important in both the personal and professional lives of college students. In addition to exploring the relationship between on-campus involvement and social media networks, this study seeks to discern any patterns in relation to different types of on-campus organizations and social media network sizes.

P-41 RACHEL COOPER, A.J. MILLER, ERIN MULLINS***Influence of Family Communication on the Mental-Health of First Generation College Students***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: Colleges and universities have focused on increasing enrollment numbers and keeping students retained to reach their educational goals. Many institutions have examined ways in which they can increase student retention and identify "at risk" students early. This study will look at first-generation students who are believed to be more "at risk" than traditional continuing college students. It is hypothesized that first-generation college students are less likely to receive positive communication about college or realistic expectations and/or suggestions for how to cope with college, and thus will have a higher rate of mental health issues.

P-42 DOAA ALWAFI, MITCHEL HANSEN***Replacing the Real World with the Virtual World: The Impact of Social Media Use on International Student Acculturation***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: International students who come to the United States experience this on new levels as they might come from cultures that differ greatly from the United States. As students move on to new aspects of their lives, social media offers a convenient tool to keep in touch with friends and family that might be far away, as well as to make friends with people in their new environment. This study seeks to examine how international students' social media network with co- and host-nationals affects their acculturation.

P-43 BARBARA POWELL***Cheap and Easy Home Automation using AWS***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: Home automation presents exciting new opportunities for consumers. Commercially available products are expensive and not easy to customize. It is also often difficult or not possible to integrate products from different manufacturers to achieve desired functionality. Using various AWS products and purchased hardware components, I will build a customized home automation system that runs through Amazon's servers. Building the platform in AWS allows remote monitoring and access of the system and adds streaming capabilities and notification services.

P-44 ALEXEY SHITOV***Deploying SQL Server on AWS***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: Amazon Web Services (AWS) provides a comprehensive set of services and tools for deploying SQL server database on the reliable and secure AWS Cloud infrastructure. In this project, I will work on implementing SQL server database using Amazon Relational Database Service (Amazon RDS), which simplifies installation, an operation, disk provisioning, and management of SQL server database. It also allows to replace failed instances and recover SQL Server database. The implementation will be followed by experiments of how the database behaves in terms of high availability, automated failover capabilities, and cost-effectiveness.

P-45 VENKAT PARUCHURI, ANUDEEP NIZAMPURAM***Automatic Data Backup using CloudWatch on AWS***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: CloudWatch is a monitoring service for AWS cloud resources. Apart from that CloudWatch can capable enough to implement Events/Rules, by using CloudWatch Events/Rules feature I would like to set up an Auto Snapshots for the volumes attached to my instance automatically by defining a time window, so that everyday CloudWatch will take and store the snapshot at defined time without any user interaction. This will help users/organization to have backup copies periodically. We can make an incremental backup of data in which the changes made every day are saved and cumulative backup, the data saved for a particular time duration.

P-46 MANOAH PRATTIPATI, BHARAT GODAVARTI***VPC Peering to Access Centralized Resources***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: For this project I would like to create a VPC peering connection between two or more VPCs out of which a VPC would be central VPC which contains resources, the other VPC's can access the central VPC and utilize the available resources. We would try to accomplish that there will be traffic between one particular peer VPC and the central VPC but no traffic between two normal peer VPC's. There is a certain limit to connect the VPC's but it is highly scalable as we can connect more than 3 VPC's. Its performance remains high and is also highly available.

P-47 YAO ZHANG, ZHIHAO ZHENG, VINAY GURRAM***Design and Implement a Cloud Authentication Scheme***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: Every year, there are more individuals and companies that start using cloud services. So cloud security is a very big deal. Cloud authentication is a special form of authentication for today's enterprise IT infrastructure. The cloud application communicates with the LDAP server which could be an on-premises directory server or an identity management service running on cloud. In this study, we designed a cloud authorization

scheme to integrate an on-premises or cloud-based directory service with a cloud application. We also discussed the pros and cons of different approaches to illustrate the best practices on this topic.

P-48 PARKER KAIN***Exploring Network Analysis Using Cloud Computing***

FACULTY SPONSOR(S): QI LI, COMPUTER SCIENCE

Abstract: Traditionally, the assessment of healthcare professionals relies on surveillance data, which is both intensive in terms of human labor, and difficult to collect. In this research, a number of techniques for exploring and collecting social media data are explored in order to evaluate the ability for healthcare professionals to potentially be evaluated using social media analytics. Technologies explored include Amazon Web Services, the Python library Tweepy and its corresponding Twitter API, as well as network analysis. In the future, these results can be used to gather information on and assess physicians.

P-49 RICHARD KOOP, ALEXEY SHITOV, TEERAPONG UTHAIRAT, BARBARA POWELL***Using IoT Device Data to Reduce Energy Consumption***

FACULTY SPONSOR(S): TRAIAN TRUTA, COMPUTER SCIENCE

Abstract: Consumers are always looking for good ways to save money by saving energy. Based on data recorded from Internet of Things (IoT) devices, we will program machine learning software to be able to determine human occupancy of a room. Once the parameters for determining occupancy are established, they can be applied to a system to make decisions on Heating, Ventilation, and Air Conditioning (HVAC) controls or other climate/comfort systems to save energy and reduce costs. We will estimate possible energy savings using automated controls and current energy pricing.

P-50 MANOAH PRATTIPATI***Measure Marketing via Advanced Technologies***

FACULTY SPONSOR(S): TRAIAN TRUTA, COMPUTER SCIENCE

Abstract: Today, a significant proportion of people are accessing the Internet, and this the ever-expanding connectivity is disrupting the marketing strategies employed by different sectors. In this paper, we seek to study the impact of social listening tools (such as Hootsuite), analytics, market automation on attracting more buyers and measuring the insights generated. The concept of internet marketing is wrapped around inbound marketing which is a technique that utilizes many forms of pull/content marketing, social media, search engine optimization, and branding.

P-51 MONIKA PRADHAN, VENKAT PARUCHURI***Detecting Data Leaks***

FACULTY SPONSOR(S): TRAIAN TRUTA, COMPUTER SCIENCE

Abstract: In the process of storing the data of an organization it is a common practice to trust the third parties to handle the data of an organization. The sensitive information, the data is to be protected from unauthorized access. Hence, detecting data leakage is very important and should be used as a precaution step. The sensitive data is generally leaked by the agents and the data leakage should be identified at an early stage. We have proposed some techniques for data leakage prevention and would further be studied in detail such as watermarking, Data Allocation Model, Fake object model etc.

P-52 ANDREW PLUNKETT***Empirical Analysis of Security Patching***

Faculty Sponsor(s): James Walden, Computer Science

Abstract: How many web sites apply security updates in a timely fashion to protect their users? To answer this question,

we analyzed data from the HTTP archive, which contains HTTP header data from web crawls performed on the 1st and 15th of every month from 2010 to the present. HTTP headers identify the version numbers of critical software, such as the PHP programming environment and TLS libraries which provide encryption for web connections. We performed a longitudinal analysis, comparing the versions of web software deployed with the vulnerabilities known at the time in that software.

P-53 JOHN MONAHAN

Taking Medicine as Prescribed Is Not Always Safe: A Study of the Student Perception of Opioid Addiction

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; REIKO OZAKI COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Most people with opiate addiction started by taking opiates as prescribed. There currently is a lack of knowledge about how educated the public is on how opiate addiction can start. This study will examine current knowledge among students of precipitating factors of the opioid epidemic, and their experiences with prescribers informing them of any risks involved with opiates. Data were collected and analyzed from surveys administered to 123 students at NKU. Expected findings include a lack of understanding of how opiate addiction can start. These findings can inform the efforts to educate NKU students about opiate addiction.

P-54 KRISTIN UHL

Academic Success: The Impact of Student Experiences

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; REIKO OZAKI COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Stressful life experiences in post-secondary education can determine academic success or failure to graduate. Students are less likely to graduate when they experience stressors such as poor mental health, substance use, disabilities, low socioeconomic status, lack of family support, or being parents. Previous studies have shown that students need multiple support systems, including family support, in order to be successful. This descriptive analysis survey will examine ways students perceive how family support systems impact their ability to successfully graduate. The findings will inform the university about the importance of family support systems for students' academic success.

P-55 TRISHA HERING

Negative Body Image: Influence of Media among NKU students

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; REIKO OZAKI COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Body image and the media are two important components in our culture. Research supports that the media's "ideal body" image creates negative effects for many individuals living in the United States. The purpose of this study is to examine how media influences body image among NKU students. Data was collected from approximately 120 NKU students who were asked to voluntarily complete a 25-question survey. The findings will provide an understanding of negative body image from NKU students and how this can be addressed as a campus climate issue at NKU.

P-56 ROBERT EDMUNDS

Impact of Social Support on Mental Health for NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Mental Illness is a growing concern on college campuses nationwide. Rates of anxiety and depression among college students are rising. A lack in social support has been found to be an emerging predictor of anxiety and depressive symptoms. Conversely, students perceiving adequate support

present with less negative mental health symptoms. The purpose of this study is to explore the correlation between the prevalence of anxiety and depression, and levels of perceived social support among NKU's students. This cross-sectional study expects to determine the effects of social support levels on mental health. Findings and implications will be discussed in this study.

P-57 SANDY S. RODRIGUEZ

Mental Health In First Generation College Students'

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Mental health become a great concern that many people face daily, including college students and within those students there is first generation college students. FGCS are students that come from a family where parents have no higher secondary education, meaning that they have a high school diploma/GED or lower. The current study seeks to address this gap in the literature by examining the following research question. To what extent does First Generation status impact stress and anxiety? Findings from this study will inform research into the student intervention on college campus and support the development of appropriate resources at NKU.

P-58 LOGAN PROBST

Examining Collegiate Poverty on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Poverty is an economic, physical, and emotional burden that is becoming more widespread at universities across the United States. This survey study of 200-300 Northern Kentucky University students is intended to examine the prevalence of food insecurity, homelessness, academic outcomes, program implementation, general health consequences, and social perceptions of poverty. The results of this study are expected to illustrate the vulnerability among college students facing poverty. Additionally, findings will discover pervasiveness, resource implementation, and awareness of collegiate poverty on NKUs campus.

P-59 CHASITY SIDLE

Collegiate Homelessness: Prevalence at NKU

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Homelessness on college campuses is an issue that has often been overlooked when considering college success rates. Previous research shows that college age youth are a group that is at high risk for being or becoming homeless and homelessness does not come without consequences on physical, mental health, and educational barriers. This study aims to define the prevalence of homelessness among college students and examine if NKU students think homelessness exists on their campus. The results from this study intend to be used as a tool to ensure the needs of students are met to increase their success rates.

P-60 SAVANNAH ELLIS

Food Insecurity and its Impact on Physical Health, Mental Health, and Academic Outcomes

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Millions of Americans are faced with worrying about where their next meal will come from. College students are especially susceptible to becoming food insecure as they often lack sufficient financial resources. The purpose of this study is to determine how prevalent food insecurity is among NKU's campus and how it impacts one's physical health, mental health, and academic outcomes. Findings from this study are expected to

indicate that experiencing food insecurity has a negative impact on one's physical health, mental health, and academic outcomes.

P-61 SHAKEYLIEA ROBINSON

What is the Prevalence of Illicit Drug Use amongst NKU Students?

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The illicit drug uses amongst Northern Kentucky University student still remain to be a persistent social problem. Very little is known to date about illicit drug use among NKU students. In an effort to fill this gap in the literature, this study will examine the following research question. What is the prevalence of illicit drug use amongst NKU students? This study will survey 200-300 NKU students to examine the anxiety, insomnia, syllabi anxiety, gambling, social support for suicide, and substance use. The result of this study is intended to see the prevalence of illicit drug use amongst NKU students.

P-62 CARISA REYNOLDS

Syllabi Anxiety

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Anxiety can affect people of all ages. There are different types of anxiety in academia like test, statistic/math/organic chemistry, and library anxiety. There may also be anxiety towards syllabi. The researcher believes that syllabus anxiety is the fear and anticipation of the information that is in the syllabus. This quantitative study seeks to examine the extent of syllabi and the contribution of anxiety among NKU students. This study expects to find an increase of anxiety towards syllabus. The findings of this study will provide insight into the relationship between student anxiety and support the student health at NKU.

P-63 LATOYA AICHELE

Food Insecurity

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Food insecurity (FI) is a growing national health issue. College students are quickly becoming a part of the emergent demographic of those at risk of food insecurity exposure. However, most existing literature focuses on childhood hunger, there is not a significant amount of literature that focuses on college campus hunger (Broton & Goldrick-Rab, 2016). This quantitative study seeks to examine the prevalence of FI among NKU students, and how it affects student's ability to maintain academic success, general, physical, and mental health. All primary data collected will be analyzed using SPSS and findings and implications will be discussed in this study.

P-64 SANDY RODRIGUEZ

Mental Health In First Generation College Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Mental health become a great concern that many people face daily, including college students and within those students there is first generation college students. FGCS are students that come from a family where parents have no higher secondary education, meaning that they have a high school diploma/GED or lower. The current study seeks to address this gap in the literature by examining the following research question. To what extent does First Generation status impact stress and anxiety? Findings from this study will inform research into the student intervention on college campus and support the development of appropriate resources at NKU.

P-65 ALI COLEMAN

Prevalence of Gambling Behaviors at NKU

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Research shows that gambling behaviors are higher among college aged students than in older adults. In 2012, it was reported that approximately 6% of college students in the U.S. had a serious gambling problem. Previously, no research has been conducted on the gambling behaviors of Northern Kentucky University's students. This study seeks to examine the prevalence of gambling behaviors on NKU's campus. The results will provide insight into what avenues students use to gamble and how often they are partaking in the activities. This, in turn, can provide insight into treatment needs and prevention efforts at NKU.

P-66 KATHRYN DAUGHERTY

Peer Relationships and Their Effects on Substance Use Disorder

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Substance Use Disorder (SUD) is growing at an alarming rate in our country. Negative effects are felt in every aspect of our society. SUD costs the United States billions of dollars to combat, and it has destroyed families. This study will examine the link between peer relationships and substance use disorder. By comparing negative peer relationships to the presence of SUD, this study will demonstrate a strong correlation between the two. Additionally, this study could illuminate the importance of positive peer relationships, and decrease the likelihood for SUD development in youths.

P-67 SARA COLLINI

Financial Stress among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Many students find out early in their educational career that financial stress can soon become unmanageable, leading to negative consequences that affect a student's educational and social well-being. Seven in ten college students feel stressed about their finances. Students are overburdened by their financial obligations such as rent, utilities, transportation, and expenses accrued from entering college. Given the scope of this social problem, the purpose of this study is to examine to what extent financial stress impacts NKU students and if financial stress disproportionately affects first-generation students. Findings from this study and implications for practice will be discussed.

P-68 LINDSEY BRYANT

The Prevalence of Grief among Northern Kentucky University Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Grief is a shared experience across all populations. Although grief can be short-term, prolonged grief comes with many mental, physical, social, and emotional complications. Further, grief can be exacerbated for populations such as college students, who experience additional life-stressors. To date, there is little research that examines the impact grief has on the college students. The purpose of this study is to examine the prevalence of grief in college students and the impact grief has on their mental, physical, social, and educational functioning. Results from this study are expected to demonstrate a decrease in functioning across all domains.

P-69 CHRIS HAMMANN

Homelessness among College Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Homelessness among college students is a growing concern, it remains very difficult to document and research

for data due to the stigma related to being homeless. It is not mandated for students to report their status of being homeless which makes it difficult for colleges across the United States to capture the data needed to address the concerns of those students who are at risk and experiencing homelessness. The purpose of this study is to explore college students' status of being homeless on campus. Findings will inform campus about this problem and the importance of appropriate student services at NKU.

P-70 JOELLE SELLET

Mental Illness among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Mental illness impacts over 40 million adults every year. There is often a stigma associated with mental illness – individuals feel shame, guilt, or as though they are a burden to their loved ones. Individuals often struggle to establish and maintain relationships, find it difficult to ask for help leading the individual to feel vulnerable and isolate themselves. Individuals are often unaware or uninformed about mental health services therefore, do not seek treatment. This study seeks to examine the prevalence of mental illness among NKU students as well as what portion of NKU students are receiving treatment and from whom?

P-71 LYDIA WALL

Food Insecurity on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Food insecurity is becoming increasingly prevalent throughout the United States. In 2016, 15.6 million people were food insecure sometime during the year. There is little research about food insecurity among college students. This quantitative study seeks to examine the prevalence of food insecurity on NKU's campus and identify gender differences among those experiencing food insecurity. The study will be conducted using self-reported face-to-face surveys and the results from this survey will be utilized by using SPSS. Anticipated findings include food insecurity and awareness of the prevalence of food insecurity on college campus. Implications of the study will be discussed.

P-72 ASHTON VAN GORDEN

The 'Smart Pill': College Students Seeking 'Limitless' Effects of Illicit Stimulant Drugs

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Stimulant medications (Adderall, Vyvanse) are designed to combat symptoms of ADHD. However, there has been a surge of college students misusing stimulants for academic, recreation, mental, and physical effects. Upwards of 43% [1] of university students admit to at least one account of stimulant misuse. The purpose of this study is to examine the prevalence and consequences of illicit stimulant misuse. Findings are expected to identify trends in the before-mentioned areas and shed light on the demand for educational and prevention programs.

P-73 KELLEY GARVEY

Anxiety and Depression: Treatment and Barriers

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Anxiety and depression are serious, yet common mental illnesses in the United States. Treatment can include medication, counseling/therapy, or a combination of both. Barriers to help-seeking include personal barriers and limited resources. The purpose of this cross sectional study, which will use self-report surveys, is to examine anxiety and depression

among NKU students, treatment style, and the possible barriers. This study expects to find high reports of anxiety and depression and low reports of treatment with multiple barriers. This study will help NKU limit the barriers to treatment and provide more treatment options.

P-74 JENNA JONES-LYONS

The Social, Mental, and Physical outcomes of Food Insecurity on NKU Students.

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The purpose of this quantitative study seeks to examine the relationship between food insecurity and its impact on the students of Northern Kentucky University's social, mental, and physical lifestyles. Northern Kentucky has a food insecurity rate that is that of the national level (15%) This study was conducted using primary data from a survey that was developed by the Trauma research group in our class. The anticipated outcome would be to know how food insecurity has impacted these students in the three facets of life, in order to help reduce barriers to food insecurity.

P-75 TAYLOR PETTY

Poverty among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: College expenses can greatly impact the lives of students from low-income families. Many students face stress due to financial hardship. Financial stress can negatively affect academic performance. Little research is available pertaining to poverty among college students. This exploratory study seeks to address how poverty affects NKU students' academic success. Data will be examined from surveys taken by 250 NKU students. Results can increase awareness and lead to new intervention strategies to aid in college students' success. This study expects to find that students in poverty will suffer from lower grades than their peers with higher income.

P-76 CAROLINE STORER

Post-Secondary Course of Study and the Impact of Adverse Childhood Experiences at Northern Kentucky University

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Adverse childhood experiences (ACEs), a wide variety of traumatic events that occur before the age of 18, are known to cause negative, long-term effects. However, only limited research has been conducted on how ACEs affect an individual's choice in career or academic coursework. This information is essential in providing appropriate resources to students. Through a campus survey of 230 participants, this cross-sectional analysis will serve to examine the correlation between ACEs and choice in post-secondary course of study in students at Northern Kentucky University. This researcher predicts that students pursuing helping professions will have a higher likelihood of experienced childhood traumas.

P-77 SARA HYDE

Financial Stress and Alcohol Use Among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Studies have shown that financial stress in college students can lead to maladaptive behaviors, such as excessive drinking as a coping skill. The purpose of this study is to examine if there is a positive correlation between NKU college students drinking alcohol, specifically due to financial issues. Students who engage in unsafe coping behaviors, could cause more personal, financial, and societal damage. The study will be utilizing a cross-sectional survey design with non-probability purposeful sampling.

The study expects to find a positive correlation between financial stress and drinking alcohol for NKU students.

P-78 CAROLINE MACKE

Student Loan Debt Crisis

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: This writer's research revealed documented evidence of the long-term effects related to the Student Loan Debt Crisis at Northern Kentucky University. The purpose of this research is to find out how student loan debt adversely affects students at NKU. This writer's research question is: What are the physical, mental, and emotional effects of financial stress at NKU? Methodology: an IRB approved study utilizing a cross-sectional survey design using non-probability purposive sampling. We found that there will be a decrease in public jobs i.e., social work. In conclusion, this writer understands that affordable education is needed to end poverty.

P-79 MEGHAN MCGREGOR

Substance Abuse

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Substance abuse is a worldwide issue and the problem is occurring right here on NKU's campus. Research states that college students are using alcohol and drugs for many different reasons, such as mental health issues, social aspects on campus, and recreational use. The purpose of this study is to discover how prevalent substance abuse is among NKU students. This study expects to find that after completion, students have a better understanding of substance abuse on college campus. After completion of the study, the implications for practice will be discussed.

P-80 KRISTEN WRIGHT

Illicit Stimulant Use among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: In the US, 3.7% of full-time college students are estimated to have engaged in nonprescription stimulant use during the past month (Arria et al. 2018). There has been very little research conducted specifically on illicit stimulant use among students at NKU. This exploratory, cross-sectional study seeks to measure how prevalent illicit stimulant use is among NKU students. The results will raise awareness and lead to new intervention strategies that can be implemented on campus at NKU. After collecting surveys from a total of 230 students, the findings are projected that the misuse of prescription stimulants is present among NKU students.

P-81 KELSEY PRICKEL

Cyberbullying on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Research on cyberbullying is still relatively new considering the advancements in technology over recent years (Dempsey et al., 2009). There has been little research conducted on the prevalence of cyberbullying among college students, and whether or not students are recognizing negative online behaviors as cyberbullying. The purpose of this study is to measure NKU students' perceptions and experiences of cyberbullying, and conclude if these perceptions influence the prevalence of cyberbullying. This study consisted of a sample of 230 students. Findings are expected to show that cyberbullying is present, but often not recognized among NKU's students.

P-82 KELSEY ZACCAGNINI

The Effects of Insomnia

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Insomnia is defined by a lack of quality and quantity of sleep, getting adequate amounts of quality sleep can be extremely challenging, especially for college students. The effects of insomnia are more than just feeling tired the next day. There can be physical, mental and educational consequences of insomnia. The purpose of this study examine the adequate and inadequate quality and quantity of sleep and how that affect student's GPA. The results of this study are expected to illustrate the negative impact that insomnia can have on students GPA.

P-83 TAMARA STONE

Mental Health among College Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: College students are dealing with daily life stress, attending classes, completing homework assignments, and many more task that can become overwhelming to an individual. College students who are struggling with anxiety and depression may struggle to complete their school work, and attend classes. The purpose of the study is to examine what percent of students at NKU utilized mental health services prior to starting college, and what percent of student at NKU are currently utilizing mental health services. The study will be conducted using face-to-face surveys on campus. The findings and implications of the study will be discussed.

P-84 JULIA KILBURN

College Athletes and Anxiety & Depression

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: There is very little evidence on anxiety and depression on college campus. The purpose of this study is to discover how prevalent anxiety and depression are among the NKU athletes. This will be accomplished through an exploratory, cross-sectional study through a 49-question survey that will take 5 minutes to complete. The study will consist of a sample size between 100-200 NKU students. Findings from this study is expected to show if any NKU athletes are dealing with anxiety or depression. The results will be used to identify ways to better serve the students.

P-85 FLORENCE ROBINSON

Microaggression Experiences among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Microaggressions are a brief subtle verbal, behavioral, or environmental insult that conveys hostile, derogatory, or negative insults against various minority groups. Multiple studies have shown that microaggressions can have a traumatic impact on student's experiences on college campuses. This cross-sectional study examined students' experiences with and their experiences with microaggressions at NKU. The self-reported survey data was analyzed using SPSS. Findings are expected to assist us in better understanding microaggressions and feelings of inclusiveness among students at NKU.

P-86 LINDSEY BARNETT

Marijuana Use among College Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Marijuana is the most commonly used illicit drug in the U.S. and on college campuses, with approximately half of college students reporting marijuana use in their lifetime.

Use of marijuana can lead to negative health and academic consequences. This cross-sectional study, which will use a self-report survey, seeks to examine the prevalence and reasons for marijuana use among NKU students. It expects to find that students have used marijuana for recreational purposes. By educating the university about NKU students' use of marijuana, NKU can work to better support students to help prevent these consequences from occurring.

P-87 MACKENZIE MAYERIK

Perceived Barriers to Reporting Sexual Assault at NKU

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Sexual assault occurs at a significant rate on college campuses regardless of gender, ethnicity, or socioeconomic status. Additionally, sexual assault is often under reported. Research is limited when examining barriers to reporting, specific to college students and gender. This study seeks to determine perceived barriers at Northern Kentucky University, and how gender plays a role. It is expected that males will perceive different barriers than females and be less likely to report, determined through 230 student surveys and quantitative data analysis. The goal being to inform education and prevention programs, encourage reporting and ultimately reduce the frequency of sexual assault.

P-88 PRESLEY GILLESPIE

Preparation for Suicidal Ideation Disclosure

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Rather than seeking professional help, college students who are experiencing suicidal thoughts may choose to confide in a friend, peer, or family member. This cross-sectional study, which will use a self report survey, seeks to examine how prepared NKU students feel to support peers who may disclose suicidal ideation. This study expects to find that students do not feel adequately prepared to respond appropriately to suicidal ideation disclosure from their peers. The findings will educate NKU on the potential need for additional interventions that will help peers to respond appropriately when suicidal ideation or intentions are disclosed.

P-89 PATRICIA FIGUEROA

Financial Stress: Student Loan Debt and Academic Outcomes

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Studies show that financial stress is an epidemic among college students. The literature validates how the stress of student loan debt can negatively affect a student mentally, physically and emotionally. There is little to no research on how stress affects a students' academic outcomes. To address this gap in the literature this research study will help determine if the effects of financial stress due to student loans debt can negatively impact students' overall academic outcomes. This study used non-probability, purposive sampling to collect data from 250 NKU students. In understanding this gap NKU can provide better support for their students.

P-90 KIRSTEN FINN

Discrepancy between Self-Reported Trauma and Experienced Adverse Childhood Experiences among NKU Students

FACULTY SPONSOR(S): KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP; CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: As research validates the consequences of childhood trauma on an individual's physical, behavioral, and mental/emotional well-being, it is essential to make informed decisions regarding treatment for those impacted by traumatic

experiences. The level of consciousness associated with adversity that individuals face in childhood may impact the ability to process the occurrences and seek treatment. Evidence related to the perception of experienced childhood trauma is likely to suggest that individuals that report adverse childhood experiences will not label these events as "traumatic". This study on perception of experienced childhood trauma using an exploratory, cross-sectional format allows for informed courses of treatment.

P-91 REBECCA HICKS

Financial Stress among NKU Students

FACULTY SPONSOR(S): KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP; CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Studies have shown that students' debt and associated financial debt, are among the leading causes of stress. Debt has been shown to decrease the sense of financial well-being and increase levels of overall stress. This study used the Perceived Stress Scale to determine NKU students' overall stress levels in relation to financial debt. The purpose of the study is to determine if financial debt contributes to students' overall stress. This study used non-probability, purposive sampling to collect data from 250 NKU students. The study expects to find that students with higher amounts of financial debt will experience increased overall stress.

P-92 JORDAN SMITH

The Prevalence of Intimate Partner Violence among NKU Students

FACULTY SPONSOR(S): KATHRYN O'DONNELL, COUNSELING, SOCIAL WORK AND LEADERSHIP; CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Intimate partner violence is a public health problem that affects millions of Americans. There has been little research done on the prevalence of intimate partner violence among students and the effectiveness of on-campus resources. This exploratory, cross-sectional study seeks to measure how prevalent intimate partner violence is and how effective on-campus resources are among NKU students. This study will consist of a sample size of 230 students. The findings from this study are expected to show that intimate partner violence is present among NKU students and also to let us know if students are familiar with on-campus resources or not.

P-93 MORGAN YOCUM

Students Experiences and Perceptions of Persons with Disabilities: Inclusion on Campus

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Nationally, 88% of two and four-year institutions reported the enrollment of students with disabilities which include a physical or mental impairment that substantially limits one or more major life activities. Prior research shows that inclusive experiences foster positive attitudes about disabilities, diversity among college students, and a greater acceptance of students with differences. This study examines how students' perceptions and experiences of having persons with disabilities in their classrooms affects their academic achievement. Data were collected through a survey administered to NKU students across campus. Findings will inform campus programs of better ways to foster inclusion in the classroom.

P-94 EMILY THOMPSON

Underrepresented: The Growing Gap between Rich and Poor on College Campuses

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Education assists individuals in social mobility, but lower socioeconomic status may prevent academic success. The educational achievement gap between rich and poor is a prominent social justice issue, as individuals from lower socioeconomic statuses continue to be underrepresented on college campuses. The purpose of this research is to examine obstacles faced by students applying to college, focusing on the impact of one's socioeconomic status. A paper survey was used to collect data from a sample of 124 participants. The result will contribute to a better understanding of how students perceive their socioeconomic status and its effects on their academic success.

P-95 KAREN BROWNLEE

Who is Watching the Children?

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The need for student-focused childcare at NKU. Nationally, student parents make up about 25% of the postsecondary student population. Only 25-33% of student parents obtain degrees within six years, often due to lack of quality, affordable childcare. This study seeks to understand childcare needs for NKU student parents. A paper survey was used to collect data from over 100 NKU students, measuring childcare needs for student parents. A descriptive analysis of results will be reported to help build the limited body of research on student parents' childcare needs. Anticipated results are that student parents at NKU need more access to affordable, on-campus childcare with flexible scheduling.

P-96 HAYLEY COLE

No Means No!: Campus Sexual Assault and Resources

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: One in five women and one in 16 men are sexually assaulted while in college. The impact of sexual assault can lead to physical, emotional, social, and academic struggles. In order to provide adequate resources on campus, it is important to find out how sexual assault affects students at NKU. Using a self-completed survey, this study investigates experiences of sexual assault, as well as the familiarity with resources and services on campus among 100 students. The results of this study will show prevalence of sexual assault on NKU's campus and will contribute to programs assisting NKU students.

P-97 KATELYN MARPLES

Centralizing Services on Campus: Can Case Management Improve Retention?

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: In the past five years, increasing mental health diagnosis and financial strain have been more problematic for traditional college-aged individuals. On-campus case management is a fast-growing field of service that addresses these factors, which can ultimately impact retention. Using self-administered questionnaires, this study seeks to discover which on-campus resources NKU students are aware of, how they are finding out about resources, and whether or not a centralized office that connects students to resources is desirable. Anticipated findings include a need for centralized assistance, such as case management, at NKU in order to reduce barriers to retention.

P-98 KAYLA HUNT

Importance of Student Engagement and Involvement on NKU's Campus

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Past research has examined universities' retention rates and its relationship to student engagement along with students' emotional reactions towards daily responsibilities. Student engagement can positively increase students' academic achievement, and personal competence. The purpose of this study is to examine how engaged and involved NKU students are within campus organizations and extra-curricular activities. This will be accomplished through a cross-sectional survey completed by NKU students. The results of this study will help identify barriers to student engagement and involvement within organizations on NKU's campus to better understand students' success and their perseverance to continue higher education.

P-99 DEBBI COX

NKU Students' Perception of Campus Mental Health Resources

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Mental health services are more crucial than ever on college campuses. When mental illnesses are left untreated, students will continue to have difficulty adjusting to college life and suffer from mental illness throughout their lifetime. The purpose of this study is to gain insight into the students' perception of mental health resources on campus and their potential to use the services in the future. Using anonymous survey, data were collected from 120 NKU students. The results of this study will inform existing mental health services on campus.

P-100 SHERI GARMAN

Retention Rates at NKU

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Nationally, it is estimated that 30% of first-year college students will not return for the second year. Dropping out of college is a detriment to both the student and the community, resulting in loss of income and economic growth. NKU's retention rate is below the national average. The aim of this study was to determine whether students would be returning to NKU and evaluating the barriers to completing a degree. A self-administered survey was used to collect data from 100 students on campus. The findings will help universities gain insight into students at-risk of dropping out including barriers they face.

P-101 IAN AIUTO

R U In Crisis?: Availability and Student Preference in Crisis Mental Health Services

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Seventy-three percent of college students experience life crises, defined as extreme emotional pain which hinders daily functioning. There is limited knowledge on how students prefer to receive mental health services, such as text messages from a crisis counselor. The need for accessible student support services is critical, as improperly handled crises can lead to increased mental health problems. This study examines how NKU students prefer to receive mental health crisis services through results collected from confidential paper surveys. Anticipated findings will demonstrate the relationship between available mental health crisis services on campus and how students prefer to receive those services.

P-102 LORETTA CROSS***The Impact of Academic Support on the Graduation Rate among Students in Need of Remedial Courses***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Among first-year students at NKU, 17.6% did not achieve the ACT score required to take college credit courses. These students needed one or more remedial courses before they can take credit-bearing courses. NKU students who took remedial courses had a graduation rate of 17.4% which was 32.6% lower than overall graduation rate. Written surveys were administered to students to examine if those requiring remedial classes needed additional academic support to increase their graduation rate at NKU. The results of the study may be informative in assisting the university to reexamine remedial courses to increase the graduation rate among this population.

P-103 STEPHANIE KUNKEL***The Signs of Opioid Use and Access to Treatment: The State of Knowledge among NKU Students***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Non-prescription opioid use has risen nationwide over the last decade. It is essential that college students understand how to access treatment and recognize when peers are under the influence. This could help with early intervention and increase academic success. This study aims to identify the state of knowledge of NKU students regarding access to treatment and recognizing the signs of use. A cross-sectional survey was administered to NKU students to collect data. The findings from this study will inform universities about the gap in knowledge on the signs of opioid use and how to access treatment.

P-104 DANIEL CHADWELL***Racism and Collegiate Free Speech at Northern Kentucky University***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: In recent years, political demonstrations by White nationalists and counter-protestors have swept across the United States. Many of these clashes have resulted in death, violence, and property destruction. College campuses are often the arena for such tense race-focused exchanges. Studies have shown that the experience of racism among college students often leads to mental and physical health issues, social isolation, and possible academic decline. This cross-sectional survey examined perceptions of race and free speech among approximately 120 NKU students. Findings are expected to assist universities in better understanding the quickly changing political landscape and overall campus-climate.

P-105 ASHLEY NEWBERRY***Barriers to Care: Negative Perceptions Affecting Mental Health Care on Campus***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Approximately one in five American adults experiences mental illness each year. Due to misconceptions regarding mental illness, many barriers exist towards receiving proper mental health care. Although services are provided on university campuses around the nation, stigma must continue to be addressed to eliminate negative perceptions towards receiving care. This study will identify current perceptions of mental illness

on the NKU campus. Data collected from 100 NKU students will be used to examine if stigma and perception of mental health affect receiving care. The result will extend the literature related to perceptions of mental illness among college students at NKU.

P-106 KEILA HAWKINS***The Effects of Stress on NKU Students***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Stress plays a significant role in the lives of college students. Many are living alone for the first time while juggling academics, a social life, and expectations. Stress can lead to further complications such as depression, anxiety, heart problems, and recurrent illness. NKU students were randomly selected to complete a questionnaire regarding the impact of stress on their lives and how they manage it. This study aims to examine stress levels in college students and how it affects various aspects of their lives. Relatively large number of students are expected to report frequent experiences of stress.

P-107 BRANDI RAHIM***The Effects of Poverty on Success and Retention at NKU***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Past research indicates that poverty negatively affects health outcomes, brain development, and access to quality education. Adults attend college in hopes of living the American Dream, but for those in poverty, the college may not come easily. This study focuses on NKU students who are living in poverty and how lacking basic needs may affect their academic success. A survey was administered to gather data on how attending college while lacking basic needs may affect the ability to succeed at NKU. The findings may assist NKU in its effort to help students in need.

P-108 NICHOLE SPJUT***Prevalence of Self-Objectification among NKU Students***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Past research indicates self-objectification, viewing oneself as an object or collection of body parts, can lead to issues such as depression, body-shaming, and eating disorders. This study identifies the prevalence of self-objectification among NKU students. Data were collected by administering paper surveys to approximately 120 NKU students on campus. Prevalence of self-objectification among students is expected to be relatively high. Understanding the prevalence of self-objectification can offer insight into reasons behind record-high rates of depression among college students, and can lead to better treatments.

P-109 BRITTANY COOK***Academic Success through Self-Care: A Study of NKU Students***

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Three-quarters of college students in the U.S. are affected by mental illness. Optimal mental health can be obtained by participating in activities that improve emotional well-being known as self-care tasks. This study examines how students' self-care practices and the presence of support systems affect their success towards graduation. A total of 124 surveys were administered to NKU students throughout campus in

order to examine the relationship between student success and the practice of self-care. Understanding the impact of self-care among college students can provide insight into why students do not remain on track for graduation.

P-110 KEELY GALLUZZO

Suicidal Ideation Awareness: A Study of NKU Students

FACULTY SPONSOR(S): REIKO OZAKI, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: An estimated 9.3 million adults reported having suicidal thoughts in the past year. Suicidal ideation is a serious public health problem that can have lasting harmful effects on individuals, families, and communities. The consequences of suicidal ideation for college students include social isolation, difficulty adjusting to college life, academic problems, alcohol and drug abuse, and untreated depression and anxiety. This study aims to identify the prevalence of suicidal ideation through self-administered surveys collected from 100 NKU students. Findings from this study will be beneficial to increase awareness of this social issue on the NKU campus.

P-111 AMANDA KUHLMAN

Northern Kentucky University's Benchmark Institutions for LGBTQ Inclusivity

FACULTY SPONSOR(S): HOLLY RIFFE, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: There is a national trend for colleges and universities to support LGBTQ students. The need to evaluate Northern Kentucky University's Benchmark Institutions for LGBTQ inclusivity is vital to holistic personal development and academic success for LGBTQ college students at mid-size public institutions. Sixteen universities will be assessed using their own promoted resources in conjunction with the Campus Pride Index, the national evaluation tool for LGBTQ inclusivity on college campuses. CPI assesses Policy Inclusion, Academic Life, Support and Institutional Commitment, Student Life, Housing and Residence Life, Campus Safety, Counseling and Health, and Recruitment and Retention.

P-112 JOZEPHINE BLISS

The Michael Field Diaries: Creating a Digital Archive

FACULTY SPONSOR(S): ANDREA GAZZANIGA, ENGLISH

Abstract: Collaborating poets and lovers Katherine Bradley and Edith Cooper wrote lyric poetry and verse drama under the pseudonym "Michael Field" throughout the fin-de-siècle and into the twentieth-century. Cooper and Bradley also co-wrote a 28 volume diary, titled "Works and Days," that spanned from 1888-1914. We transcribed and annotated the 1907 volume to be included in an online archive of their journals which chronicled their conversion from Paganism to Catholicism and described their personal relationships with famous figures of the time. This project advances a more inclusive literary canon that acknowledges lesser known gay and women writers.

P-113 SAGE BOYERS, ALEXANDRA WEBER

An Account of a Woman in the Abolitionist Movement: NSF REU The Parker Academy Project

FACULTY SPONSOR(S): WILLIAM LONDON, HISTORY & GEOGRAPHY; SHARYN JONES, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Established in 1839, the Parker Academy located in New Richmond, Ohio was one of the first fully integrated schools in America. Founders Daniel and Priscilla Parker, staunch abolitionists, set out to create an environment conducive to learning for all, regardless of race, gender, or age. A National Science Foundation grant enabled the investigation of the archival record from the Parker Academy and affiliates, creating an understanding of the creation and impact of the academy. Priscilla, the driving force behind the creation of the academy,

gives proof of the power a woman can hold as an influential abolitionist and educator.

P-114 ANDREA SHIVERDECKER, COOPER PFALZ

Revisiting the Parker Academy: One Photo at a Time

FACULTY SPONSOR(S): WILLIAM LONDON, HISTORY & GEOGRAPHY

Abstract: The perception and methodology of recording history changed dramatically with the advent of photography. Throughout the 19th century, the rapid development and improvement of photography gave people a new way to experience and record history as it unfolded. With Gettysburg, the first battle to be photographed, the invention of photography had a monumental impact on public perception that few appreciate. The Parker Academy archives chronicle the developing use of photography, its technological progression, and grants historians the unique opportunity to interpret first-hand accounts pertaining to the extraordinary occurrence that was, possibly, the first integrated school, located in New Richmond, Ohio.

P-115 LIZA VANCE

The Science of the Parker Academy Archives

FACULTY SPONSOR(S): WILLIAM LONDON, HISTORY & GEOGRAPHY

Abstract: Historical documents are not usually thought of as scientific. However, the information that is contained within becomes the data that defines an archival collection which will be used to organize an understanding of past events. The science of archives uses the raw data for further scientific activities such as cataloging, authenticating, preserving, and storing. This poster will explain how archival science will be used to organize and conserve the documents from the 1839 Parker Academy; an integrated school which allowed any gender or race. Archival science will preserve these historical documents so that they can be used in future research,

P-116 RUTH HORSTMAN, CHELSEA HAUSER

A Study of Charles W. Currier Through the Parker Academy Archives

FACULTY SPONSOR(S): WILLIAM LONDON, HISTORY & GEOGRAPHY

Abstract: Charles W. Currier married Fannie Parker, descendant of the Parker Academy founders of New Richmond, Ohio. Parker Academy was founded as a multi-racial and multi-gender school prior to the Civil War. Currier entered the Civil War with an Union unit from Massachusetts. During the middle of the war, he was promoted to Lieutenant of Company "G" 12th Kentucky United States Colored Heavy Artillery. Follow Currier's movements around Kentucky as he leads his men. Witness the Court Marshall and acquittal of Currier. After the war was over, Currier answered the call to become an ordained minister

P-117 SIERRA LORENZ

The Evolution of Evolutionary Models

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY

Abstract: The hypotheses surrounding the evolutionary models of mankind have been evolving practically since Darwin's On the Origins of Species was introduced. The first widely accepted model of evolution was the Multi-Regional Model. This model purported that homo erectus left Africa where it then evolved in separate locations into modern humans. This model was replaced during the 1980s by the Out of Africa Model. This model has been widely accepted as the truest model of evolution which has homo sapiens leaving Africa around 100,000 years ago. However, new discoveries are putting this model at risk of becoming obsolete as well.

P-118 BEN REYNOLDS

Crisis in Kentucky: The Race to Capture the Horse Industry Crown 1860-1900

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY

Abstract: Kentucky's preeminence in the horse industry began in the antebellum period, but competition in the 1870s and 1880s from New York horse farms and racetracks put pressure on Kentucky's reputation for horse breeding. Kentucky African-American jockey, Isaac Burns Murphy, began racing in 1875 and his dominant performances helped restore Kentucky's horse breeding reputation. This poster presents the competitive nature of horse industry in the late nineteenth century and the importance of Murphy to Kentucky's premier role in the industry.

P-119 SARA MORETON

Loretta Lynn: The Queen of Country Transforms a Music Genre

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY

Abstract: Loretta Lynn, born in the backwoods of Kentucky, expanded the opportunities for women in the male-dominated world of country-western music. The "Queen of Country" wrote songs that expressed feminine strength, determination, and a sense that women could survive without men. Her perceptive business sense and talent for self-promotion demonstrated that women could thrive in the competitive music industry. In 1967, the Country Music Association recognized the new importance of women singers by giving Lynn its first-ever award for Female Vocalist of the Year. Her work transformed country music and paved the way for other female solo country music artists.

P-120 JOHN CLAY PRATHER

Cora Wilson Stewart and the Moonlight School Program

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY

Abstract: Cora Wilson Stewart, a young Kentucky schoolteacher, founded the Moonlight School program in Rowan County, Kentucky in 1911 to combat adult illiteracy. Operating only on moonlit nights, the program staffed by volunteer teachers taught thousands of Kentucky adults to read and write, and was the basis for a national program for adult literacy. Stewart's work placed her at the forefront of the education field and this poster examines the Moonlight School program and Stewart's role in state and national education issues.

P-121 MAGGIE CARRINO

The Great Dissenter: John Marshall Harlan and the Supreme Court

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY

Abstract: John Marshall Harlan began a law career and turned to politics in the pre-Civil War era. He joined the Union Army when the Civil War started, but controversially resigned in 1863. Despite this, Harlan was elected Kentucky Attorney General and propelled his status. He caught the attention of U.S. President Rutherford B. Hayes, who appointed him to the U.S. Supreme Court in 1877. As a member of the court, Harlan was a dissenter on many of the court's famous cases and established a legacy that is recognized as one of the best Supreme Court Justices to have ever served.

P-122 MACKENZIE MANLEY

The Northerner: Our Coverage

FACULTY SPONSOR(S): MICHELE DAY, COMMUNICATION

Abstract: The Northerner, NKU's student-run news organization, shares the major stories of campus in the 2017-2018 academic year. Project highlights range from the impact of state budget cuts and efforts to support victims of sexual assault to students' philosophies on self love to the journey of the men's basketball team seeking its second Horizon League championship. In addition, The Northerner marked the university's 50th anniversary year by capturing the school's most significant moments of the past using the digital tools of the present.

P-123 JORDAN HORNING

An Assessment of Player Load™, High Intensity Jumps, and Caloric

Expenditure Throughout a Preseason Volleyball Training Camp

FACULTY SPONSOR(S): GABE SANDERS, KINESIOLOGY & HEALTH; BRIAN BOOS, KINESIOLOGY & HEALTH

Abstract: Currently, wearable technology can measure athletic movements in all directions. The purpose of this study was to quantify training workloads and caloric expenditure in Division I volleyball athletes with wearable devices. Eleven volleyball athletes were monitored using two, validated wearable microsensor devices (Polar and Catapult Sports). The Catapult movement tracking device was worn in a garment secured to the athlete's upper, middle back. The Polar device was strapped around the athlete's chest to monitor heart rate and calories expended. 17 preseason practice sessions were monitored.

P-124 ANDREW SCHILLE

Evaluation of Perceived Exertion in Determining Metabolic Thresholds During Exercise

FACULTY SPONSOR(S): CORY SCHEADLER, KINESIOLOGY & HEALTH

Abstract: This study aimed to find Rating of Perceived Exertion (RPE) values that correlate with the aerobic threshold (VT1) and anaerobic threshold (VT2) during exercise. Establishing when VT1 and VT2 occur according to RPE would benefit those who want to know if they are performing at these thresholds without prior need for expensive, time-consuming maximal exercise tests. Previous research has shown that such relationships can exist, however there is some debate on when VT1 and VT2 each occur according to RPE. In addition, most research concerning RPE at ventilatory threshold (VT) does not separate VT into VT1 and VT2.

P-125 TRISTAN TAPIA

Repeatability of Physiological Variables in a Self-Paced Cycle Test

FACULTY SPONSOR(S): CORY SCHEADLER, KINESIOLOGY & HEALTH

Abstract: Recently a self-paced test (SPV) has shown to be a valid VO2max test. The SPV consists of a 10-minute stationary bike ride during which the subjects self-adjust their power output based on the 6-20 Borg rating scale of perceived exertion. The purpose of this study is to assess the repeatability of physiologic variables (VO2 max, Ventilatory Threshold, and Maximal Heart Rate) between trial 1 and trial 2 on this laboratory SPV. Subjects will complete two laboratory SPVs while heart rate and gas exchange are measured. Results will help determine if there are advantages to performing a familiarization trial.

P-126 ANTHONY COUCH

Validity of Heart Rate Variability for Identifying Ventilatory Thresholds during a Self-Paced Exercise Test

FACULTY SPONSOR(S): CORY SCHEADLER, KINESIOLOGY & HEALTH

Abstract: Previous studies have indicated that during incremental, non-self-paced exercise tests, heart rate variability (HRV) significantly correlates well with ventilatory threshold (VT). Studies have not performed these analyses during self-paced tests in which individuals have control over the intensity at each stage of the test. The purpose of this study is to determine whether HRV is a valid means of identifying aerobic and anaerobic VT during a self-paced, cycling VO2max test. Being able to identify VT1 and VT2 through HRV could provide a valid, inexpensive, and non-invasive means of determining the intensity at which individuals reach threshold.

P-127 CARTER BYRNS

Analyzing Feeling during Self-Paced Exercise to Estimate Respiratory Exchange Ratio

FACULTY SPONSOR(S): CORY SCHEADLER, KINESIOLOGY & HEALTH

Abstract: Determining if exercise enjoyment during exercise correlates with respiratory exchange ratio (RER) can help the average person looking to exercise understand how they should feel when exercising at a certain pace, whether they are training

aerobically or anaerobically. This may also help determine the extent to which each metabolic fuel source, carbohydrates or fats, is being used during exercise. Subjects completed an exercise test in which they self-selected their work rate while feeling was measured on a scale of 5 (Very Good) to 0 (Neutral) to -5 (Very Bad). RER was determined through expired gas analysis.

P-128 CHARLES BRITT

Effectiveness of Blood Flow Restriction (BFR) Training in Lower Extremity Muscle Force Production in Active College Male

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: Blood-flow restriction (BFR) is characterized by the use of cuffs or wraps placed around an extremity to maintain arterial inflow while preventing venous return. BFR combined with resistance training has shown that hypertrophic and strength adaptations can be induced with lower exercise intensities (<50 % 1-RM). Occlusion training can provide a unique, beneficial mode of exercise in the post-operative rehabilitation setting because it produces positive training adaptations that would be equivalent to physical activity of daily life. The purpose of this study is to determine the effectiveness of BFR training in lower extremity muscle force production in active college males.

P-129 GEORGIA CHILDERS, MOLLY MERTLE, SEAN SULLIVAN, STEVEN KINSER, JASON ZAVISLAK

Warm-Ups: Worth it or Waste of Time?

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: A proper warm up is thought to prepare an athlete for functional activities and improve performance by stimulating blood flow to the muscles needed to perform the activity. There are many types of warm ups, including static stretching and the use of heat packs, among others. The purpose of this report is to assess the effect of different types of warm-ups on range of motion and sport-specific function in physically-active, college-aged females.

P-130 PATRICK FARRELL, SAMANTHA DUNCAN, BRANDON JENKINS, OLIVIA LACKEY, BRIE HENDERSON

The Effect of Kinesiotape on Proprioception at the Talocrural Joint in Physically Active College-Aged Males

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: The human body, in a standing weight bearing position, is in a constant state of maintaining balance and that balance is challenged during motion such as walking or running, on in an unstable position such as standing on one leg or going over an uneven surface. Balance is achieved through proprioception, the unconscious perception of the body in space. Kinesiotape has been thought to assist with proprioception through stimulation of cutaneous mechanoreceptors, resulting in improved balance. The purpose of this study is to assess the effects of Kinesiotape on proprioception at the talocrural joint in college-aged physically active males.

P-131 LAURA FARRO, ALYSSA FARMER

Fueling the Future Four States at a Time

FACULTY SPONSOR(S): LISA HOLDEN, MATHEMATICS & STATISTICS

Abstract: As part of the annual Mathematical Contest in Modeling, we created a metric called the "energy score," a measure intended to assess a state's usage of clean and renewable resources. The energy score has two components: the first rewards states for minimizing CO₂ emissions, and the second rewards states for maximizing renewable energy usage. Based on the trend of a state's energy scores from 1960 to 2009, we created concise energy profiles that allowed us to rank the energy consumptions of states wishing to form energy compacts and to provide recommendations on how to improve each state's energy profile.

P-132 RACHEL DRIEHAUS

Examining Renewable Energy Trends for Texas, New Mexico, Arizona, and California

FACULTY SPONSOR(S): LISA HOLDEN, MATHEMATICS & STATISTICS

Abstract: As part of the annual Mathematical Contest in Modeling, we created energy profiles for four western states that are interested in forming an energy compact to guide their increased use of clean energy. Based on data covering 50 years and 605 variables, we made predictions about how much renewable energy the states will be producing in the future and developed realistic targets for increasing each state's reliance on renewable energy. Specific recommendations were also created to help states move toward their energy goals.

P-133 COLTON GEARHART

Basketball: The Statistics Behind the Statistics

FACULTY SPONSOR(S): CARL MILLER, MATHEMATICS & STATISTICS; JOSEPH NOLAN, MATHEMATICS & STATISTICS

Abstract: This research project utilizes logistic regression to estimate winning probability for Division I college basketball games based on current in-season stats. Classification models incorporated numerous available variables and data from the 2008-2013 seasons. Model performance was evaluated based on percentage of correctly predicted games for validation data. Consistency of results across seasons was also considered. Models developed as a result of this study were shown to improve the naive approach of always picking the home team.

P-134 ALYSSA FARMER

Analyzing the Effects of NGSS-Aligned Professional Development Sessions on Elementary Teaching Methods

FACULTY SPONSOR(S): JOSEPH NOLAN, MATHEMATICS & STATISTICS; MADHURA KULKARNI, CENTER FOR INTEGRATIVE NATURAL SCIENCE AND MATHEMATICS; PATRICIA BILLS, TEACHER EDUCATION

Abstract: Elementary teachers in Northern Kentucky participate in a unique professional development program involving live teaching demonstrations and reflection sessions that incorporate the Next Generation Science Standards. Effectiveness of sessions is evaluated based on classroom usage of associated practices in teaching. RM-ANOVA with Tukey-adjusted multiple comparisons is used to evaluate change in percent across sessions, with results from a participant's first session serving as a baseline. Teachers reported statistically significant increases in their implementation of the practices. Results contribute to the elementary science teaching community, identifying areas worth exploring as elementary teachers take up new ideas in science teaching.

P-135 BAILEY LEININGER

Mechanical Properties of 3D Printed Metals

Faculty Sponsor(s): Seyed Allameh, Physics, Geology & Engineering Technology

Abstract: With the advent of 3D printing technology growing fast, it is important to determine the properties of objects made by this new process. Since some sensitive products, used in life-sustaining applications, are currently made by 3D printing, the reliability and durability of such components must be closely examined. Mechanical properties of metals may vary with the direction of heat transfer during solidification. This study presents the results of tensile tests, conducted at microscale on samples extracted from 3D printed metals. The implications of the variation of strength with solidification direction on the reliability of such metallic objects are discussed.

P-136 FAHD ALHAJRI

Mechanical Properties of 3D Printed Biomimicked Composites

FACULTY SPONSOR(S): SEYED ALLAMEH, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The application of biomimetics to the fabrication of structural composites has been shown to enhance their toughness and dynamic shear resistance. Building homes from bioinspired composites is possible if the process is automated. This can be achieved through additive manufacturing where layers of hard and soft materials can be deposited by 3D printing. This study examines Mechanical properties of biomimicked composites fabricated by 3D printing. Preliminary results of 4-point bend tests will be presented and the implications of 3D printed home building on the current conventional construction practices will be discussed.

P-137 ALEX OLIVAN, JESSICA BAILEY, JACOB LINDNER

Cretaceous Micro-Vertebrates from the Greenhorn Formation of South Dakota (Cretaceous, 100 Million Years Ago)

FACULTY SPONSOR(S): JANET BERTO, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The Greenhorn Formation was deposited in the Western Interior Seaway from the mid to late Cretaceous, about 100 million years ago. Research focuses on sorting and identifying micro-vertebrate fossils from this mostly limestone formation. Ultimately, these identifications will be combined with geographic and stratigraphic information to determine patterns in species distribution. The long-term goal is to identify patterns in species distribution geographically and through time. This time period was critical in the evolution of certain groups of animals, including the earliest mosasaurs, so it is important to identify the fauna and distribution.

P-138 ZACK IVEY, BEN ROENKER, ROGER OLSON, TIM FALLER

Using Sequential Lidar Data to Identify and Monitor Landslides In Kenton and Campbell Counties in Northern Kentucky

FACULTY SPONSOR(S): SARAH JOHNSON, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY; HONGMEI WANG, HISTORY & GEOGRAPHY

Abstract: Direct costs of landslide remediation such as road repairs in the State of Kentucky exceed 10 million per year. Mass movements in Northern Kentucky occur frequently in colluvium of the Kope formation, glacial deposits, and anthropogenic fill. Elevation difference maps derived from sequential LiDAR data flown in 2007 and 2012 are used to identify and inventory previously uncataloged landslides and to monitor known landslides. Landslides identified will be added to the Kentucky Geological Survey landslide inventory and included in published quadrangles of the surficial geology. As the landslides are cataloged, additional attributes are recorded for use in future studies.

P-139 JAMES GROESCHEN, DAN MARTIN, ALEX OLIVAN

Mapping X-Cave in the Carter Caves System

FACULTY SPONSOR(S): SARAH JOHNSON, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: Mapping caves is important for a variety of reasons. It may provide insight into the formation of the cave or its effects on local or regional water transport. Carter Caves is a state resort park in Carter County, Kentucky and the cave known as X-Cave within the system has not yet been fully mapped. The purpose of this project is to take measurements of the dimensions and the orientations of passages within the cave itself, record that data and transfer it onto a map which will be published for use by the resort park.

P-140 CARTER KRING, TYLER STRAIGHT

Determination of Relative Gains in the Boronated Scintillator Detector

FACULTY SPONSOR(S): SCOTT NUTTER, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The Boronated Scintillator Detector (BSD) in the ISS-CREAM instrument is designed to discriminate between

incident electrons and hadrons. The active region of the detector consists of a single slab of boronated scintillator viewed by 18 photomultiplier tubes (PMTs). Light is produced by through-going particles in the BSD and is detected by the PMTs. Individual PMT and electronics gains were measured previously. In addition, the signals produced by muons passing through the center of the BSD were recorded. This study compares measured gains from the earlier measurements with relative gains calculated from the muon signals.

P-141 TYLER LABREE

Energy Determination in the ISS-CREAM Instrument Using Simulations

FACULTY SPONSOR(S): SCOTT NUTTER, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The ISS-CREAM instrument was launched to the International Space Station August 2017 to study the elemental composition of cosmic rays. The calorimeter (CAL) detects a constant fraction of total cosmic ray energy with a resolution of 50%. This work uses a computer simulation of the CAL to verify the measurement resolution and that the energy detected follows a linear function. The verification is made with simulated data before and after a smearing that reflects the uncertainty present in real data. The results are important in extrapolating energy measurement performance from test beams of the CAL to flight data.

P-142 ZANE DECKER, ANTHONY FEGHALI, MICHAEL CALDWELL

Norse Baja

FACULTY SPONSOR(S): MORTEZA SADAT-HOSSEINI, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The Society of Automotive Engineers is a professional organization open to students in the engineering and engineering technology fields. This project is to simulate real-world engineering design and related challenges. Students involved are tasked to design, build, test, promote and race the vehicle according to the Society of Automotive Engineers rules. The vehicle must traverse rough terrains during the competition. Norse Baja members are responsible for generating the financial support for the project. This project reports on the design, manufacturing, project planning, and logistics involved.

P-143 ANGELA CROUT-MITCHELL

The Implication of Political Ideologies on Supreme Court Decisions

FACULTY SPONSOR(S): MICHAEL BARANOWSKI, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: The US Supreme Court justices are responsible for determining the meaning of the Constitution and existing laws impartially. Political ideologies and opinions outside of the interpretation of the law are not intended to factor into the court's decision. However, given that Supreme Court nominees are nominated by sitting Presidents, it can be assumed that they are chosen, in part, due to their ideologies. This paper is intended to explore to what extent political ideologies impact pivotal decisions of the Supreme Court, as well as the implications of ideological divisions on the bench.

P-144 JANIAH MILLER

A Polarized Congress

FACULTY SPONSOR(S): MICHAEL BARANOWSKI, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: The research looks at the history of congress to discover how congressional problems came to be in the United States. The goal is show why congress is so broken today, who's responsible for this mishap, and how can we fix it because as a country it's important to have an effective government to be a true voice for the people. You don't have to look hard to see evidence of political polarization—just watch cable news, or

follow social-media debates. But scholars show that the cause of our polarized congress roots back to the 1970s. Why is this?

P-145 CHELSEA GARVEY

Examining Leadership Style and Personality of J.K. Rowling

FACULTY SPONSOR(S): ADAT. CENKCI, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: The purpose of this study is to compare the leadership style and personality of J.K. Rowling with common characteristics of English leaders. Thus, a review of scholarly resources about J.K. Rowling and former research on Leadership in England has been done. The findings indicate that while J.K. Rowling has some of the common characteristics of English leaders (e.g. Humane Orientation), she doesn't clearly possess some others (e.g. High Individualism). The outcomes of this research point that to be compassionate global leaders, we need to evaluate each person separately and do not stereotype based on one's country of origin.

P-146 AMANDA DUNN

Analyzing Leadership Style and Characteristics of a Female Entrepreneur

FACULTY SPONSOR(S): ADAT. CENKCI, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: The purpose of this research was to explore the leadership styles and characteristics of a successful, female entrepreneur. The research was conducted through an interview where the entrepreneur was asked questions about her thoughts on leadership and how she has molded herself into the leader she is. The interview answers were then compared and associated with leadership theories and concepts. The findings pointed that the entrepreneur exhibits authentic and servant leadership characteristics in addition to Team Management Style of Leadership. The greatest lesson from this research is the importance of having an inner passion that will fuel your own leadership.

P-147 HANNAH BERTER

Toxic Leadership's Impact on Follower Perceptions of Leadership

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Leadership is recognized as a process of influence in which individuals work together in pursuit of a common goal. Ideally, leaders embody positive leadership traits such as honesty, integrity, and respect that can serve to naturally inspire followers toward objectives. But, what happens to followers' perceptions of leadership when they are subjected to destructive, toxic leadership? The purpose of this qualitative study is to examine the impact of toxic leadership on followers' perception of leaders and the act of "doing" leadership. Findings from this study may provide insight to assist followers in managing the negative impact of toxic leaders.

P-148 CHRISTOPHER MADDOX

Fostering Workplace Diversity through Transformational Leadership

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Research has proven the value of workplace diversity for developing a creative, thriving organizational culture. We know that a diverse workplace has value, but which leadership approach is best suited to ensure that diversity is not only welcome, but thrives in the organization? This study will examine the qualities of transformational leadership and how the four, underlying elements of transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, individualized consideration) may influence and foster workplace diversity. The results from this study may provide insight about

which transformational leadership elements are most effective in fostering a positive effect on workplace diversity.

P-149 MATTHEW KRESNAK

Manipulating the Media and Silencing the People in Venezuela

FACULTY SPONSOR(S): RYAN SALZMAN, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Former Venezuela president Hugo Chavez centralized the media and used the media to manipulate the perception of political rights in Venezuela, undermining the freedom of expression that it is essential for democracy. This paper gives examples of how the leadership used the media to deprive freedom of expression and expanded their rule across media outlets. By using Freedom House data the author comparatively measures freedoms across Latin America and uses the data to tell the stories of other acts of censorship and restricting the right to express freely.

P-150 DAVID FREY

Free, Fair, and Frequent Elections in the Middle East

FACULTY SPONSOR(S): RYAN SALZMAN, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Free, fair, and frequent elections are a cornerstone of democracies around the world. What about in the Middle East (arguably one of the most oppressed regions), how are elections there? This paper analyzes previous scholarly research on elections in the Middle East, and specifically Jordan, Israel, Iran, Saudi Arabia, and Syria. Freedom House data is employed to examine the region as a whole and the five countries mentioned above, to analyze elections in the region, concluding that the region still has a long way to go before elections can truly be free, fair, and frequent.

P-151 SAMANTHA DAVIS

Freedom of Ethnic and Religious Minority Groups in the Middle East: An Analysis

FACULTY SPONSOR(S): RYAN SALZMAN, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Freedom of expression, specifically freedom of religion and the freedom for minority groups to participate in the political arena, is extraordinarily important for a functioning democracy. Unfortunately, much of the Middle East and North Africa (MENA) fails in this regard. Utilizing Freedom Houses Freedom in the World index, an examination of four MENA states - Lebanon, Egypt, Syria, and Saudi Arabia from 2011 (the year of the Arab Spring) to 2017 will provide an assessment of the political rights and civil liberties of ethnic and religious groups in these states.

P-152 CHRISTIAN MILLER

Comparing Elections Using Freedom House Data in Peru, Chile, Nicaragua, Argentina, and Venezuela

FACULTY SPONSOR(S): RYAN SALZMAN, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Democracy is an idea without one solid definition. In order to classify a state as a democracy there are qualifications that have to be met to recognize that state as a true democracy. One of the most important tenants of Democracy is elections that are free, fair and frequent. This paper will look at Peru, Chile, Nicaragua, Argentina, and Venezuela and explore their elections and see how free, fair, and frequent they are.

P-153 KERI RICHARDSON

Underlying Consequences to Eating Chocolate

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Consumers indulge in chocolate and are unaware

of the consequences. Every day, West African cocoa farmers are exploited by corporations to meet chocolate's increasing demand. The purpose of this study is to research chocolate and analyze how global north decisions contribute to the dependence on child and slave labor. Historical exploitation by colonial empires gave the global north an advantage over the global food system and cocoa farmers. Initiatives like the Harkin-Engels Protocol aim to eliminate child labor and certify ethically-sourced chocolate but, without compliance from those involved, cocoa production and slave labor will remain interconnected.

P-154 ERICA MCCULLOUGH, MAGGIE CARRINO, ALLISON COOPER
Organic v. GMO, is All Natural Really the Best Option?

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: The market for organic food is expanding. Many people believe that organic food is healthy, so they are turning away from conventionally-grown products. The term "organic" seems to signify that the food is free of chemicals and genetically modified organisms (GMOs). Some experts claim that organic food is beneficial not only for one's health, but also for the environment. Others claim, however, that conventional GMO production is actually better for the environment and does not have any known adverse health effects. So which type of food, organic or conventional, is better for our bodies and our planet?

P-155 DEJAH RAWLINGS

Plant-Based Diet Versus Meat-Based Diet

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: People have been eating plant-based diets for millennia. However, this lifestyle has recently gained in popularity, especially in Global North countries. The diet is being adopted and encouraged by famous actors, professional athletes, and celebrity doctors. One might ask what are the benefits and reasons for this new health trend, and can the average person follow this diet plan as well? My goal is to try to answer these questions. I will observe and explore the environmental and health benefits and consequences of a plant-based diet versus a meat-based diet.

P-156 ELI TERRY, LYDIA SCHUBARTH, SIERRA LORENZ

The Growing Crisis of Electronic Waste: How the Increase in Technology Affects Developing States

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: The rise in consumer demand for electronics has resulted in an international abundance of electronic waste, also known as e-waste. Consumerist culture, which is also rising in emerging economies like China and India, contribute to a massive outflow of discarded electronics. These used to go to China, but it recently outlawed waste imports, which may mean more waste will be shipped to even less regulated countries like Ghana. This exponentially growing mass of waste is a controversial issue. It can provide income to poorer people, but at the cost of health and environmental problems.

P-157 DUSTIN SATTERLEY

American Trade Policies Regarding Food and the Effects of those Policies

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Countries try to protect their own interests in the international food system by using tariffs and non-tariff barriers. Tariffs are trade taxes, such as taxing foreign meat imports. Non-tariff barriers include domestic policies like quotas, embargoes, and subsidies that disadvantage foreign competitors. My project examines tariffs and non-tariff barriers implemented by the

United States, the subsequent effects of those policies, and the power of multinational corporations. In protecting domestic food markets, the United States has faced issues of overproduction, a transition to large-scale farming, an increase in the amount of processed food, and public health problems.

P-158 DEANNA WILLIAMS

Hidden Costs of Palm Oil

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Makeup, shampoo, ice cream, chocolate, cleaning products - Is there anything that does not contain palm oil anymore? Disguised with various names on labels of everyday products, this ingredient is used for its versatility and cheap price tag. Consumers may not realize the hidden costs for its inclusion, however. This presentation discusses how the most efficient source of vegetable oil raises human rights concerns and is contributing to environmental destruction, particularly in Indonesia and Malaysia, where 80% of the world's palm oil is produced.

P-159 KATIE SAWVELL

Effects of Maternal Immune Activation on Glucocorticoid Receptors

FACULTY SPONSOR(S): MARK BARDGETT, PSYCHOLOGICAL SCIENCE

Abstract: Evidence suggests that maternal immune activation (MIA) may cause changes in stress physiology of the offspring's developing brain. Glucocorticoid receptors bind the stress hormone cortisol and act as a component of brain's response to stress. This study determined the effects of MIA in rats on glucocorticoid receptors in the brains of adult offspring. Pregnant rats were injected on day thirteen of pregnancy with the immune activator, Poly I:C, or saline. During adulthood, offspring were tested for auditory startle responses and glucocorticoid receptor density in the hippocampus. Offspring exposed to MIA startled less and demonstrated modest changes in glucocorticoid receptor density.

P-160 MARISSA CHITWOOD, STEPHANIE FOX, SARAH HOPKINS

Assessing Effects of Nature on Perceptions of Pain and Pain Tolerance

FACULTY SPONSOR(S): KATHLEEN FUEGEN, PSYCHOLOGICAL SCIENCE; KIMBERLY BREITENBECHER, PSYCHOLOGICAL SCIENCE

Abstract: We investigated whether viewing images of nature increases pain tolerance. One hundred twenty female students from NKU were randomly assigned to one of three conditions: pleasant nature, pleasant non-nature, or control. To induce pain, participants submerged their hand into a refrigerated bath with a water temperature of 36°F. We hypothesized that participants viewing pleasant nature images would show higher pain threshold (point at which pain begins to be felt) and pain tolerance (point at which pain is no longer tolerated) than participants viewing pleasant non-nature images and control participants.

P-16 JESSICA RAINES

Pen Chromaticity's Effect on the Recall of Details Following Lecture Annotation

FACULTY SPONSOR(S): KATHLEEN FUEGEN, PSYCHOLOGICAL SCIENCE; KIMBERLY BREITENBECHER, PSYCHOLOGICAL SCIENCE

Abstract: This study investigated the impact of pen color used while taking notes during a lecture on subsequent exam scores. Its purpose was to examine the finding in previous research that the color red impairs academic performance. Undergraduate participants were randomly assigned to use either a blue or red pen to take notes on a brief lecture from the Khan Academy about the Bay of Pigs. The notes were collected and participants were given an exam to complete with the same color pen. The effect of pen color on the volume of notes taken and exam performance will be examined.

P-162 CLARE MEARNS, KELLY KRUMMEN, TATIANA PARADELLA- BRADLEY
Use of the Biodex Biosway to Assess Alcohol-Induced Impairments of Balance and Coordination

FACULTY SPONSOR(S): CECILE MARCZINSKI, PSYCHOLOGICAL SCIENCE
 Abstract: Detection of motor impairment is widely used as an indicator of probable alcohol intoxication (e.g., the police standardized field sobriety test). However, most testing is imprecise and does not use automated technology. Therefore, the purpose of this study was to examine the acute effects of alcohol on balance impairments as measured by the Biodex Biosway Portable Balance System. Using a within-subjects study design (n=12), the results indicated that body sway increased and limits of stability decreased in a dose-dependent manner. Therefore, this new technology may be of interest to alcohol researchers as a more precise assessment of gross motor control.

P-163 NICK JEFFERSON, LINDSAY CASON, CARESSA NEY, MADALYN WHITE
Individual Perceptions of Positive Work Climate: How Do You View the Place Where You Work?

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE
 Abstract: The study describes the development of a scale designed to assess individual perceptions of positive work climate (IPWC). We constructed 50 items to represent five theorized dimensions of PWC, conducted exploratory factor analysis (N = 350), and examined factor correlations with six external constructs to provide evidence of criterion validity.

P-164 ANGELA ZOOK, KATE LEGTERS, BRIE LINGAO, SAMANTHA PHILLIPS, EMILY OSTER

Perceptions of Performance Appraisal Effectiveness

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE
 Abstract: The present study describes the initial development and preliminary validation of a multidimensional scale designed to measure performance appraisal effectiveness. Exploratory factor analysis (N = 353) revealed three dimensions, perceived accuracy, utility, and organizational climate. Factor correlations with external scales assessing organizational justice, job satisfaction, and turnover intention are reported.

P-165 NEHA SRIVATSA

The Effect of Praise on Students Based on Their Fear of Failure

FACULTY SPONSOR(S): KALIF VAUGHN, PSYCHOLOGICAL SCIENCE
 Abstract: Why do students quit after experiencing adversity? We had participants solve word problems in three phases (easy problems, impossible problems, and then easy problems). Following the initial easy problems, participants were given praise on either their natural ability or effort. Next, all students experienced failure by attempting to solve impossible problems. Final performance on the last set of easy problems revealed that praise made no difference, as all students had given up. We are currently running a follow-up experiment using word fragments and exposing students to less failure overall. Results may help promote student resilience.

P-166 MARISSA CHITWOOD

Cognitive Performance and Sounds: The Effects of Lyrical Music and Pink Noise on Performance.

FACULTY SPONSOR(S): KALIF VAUGHN, PSYCHOLOGICAL SCIENCE
 Abstract: Students frequently listen to music while studying, so we examined if listening to lyrical music impairs students learning and if pink noise improves students learning. Participants studied a passage on dolphins and a dolphin body diagram. Some participants studied while listening to pink noise (random noise having equal energy per octave), pop music with lyrics, or read in silence. After a distractor task, participants took an immediate test over the passage which consisted of multiple-choice questions and questions wherein participants labeled the dolphin

diagram. Afterwards, participants answered questions on the experiment and their personal study habits.

P-167 NEHA SRIVATSA, SAMANTHA DONELL

Usability Testing on Steely Library Website

FACULTY SPONSOR(S): KALIF VAUGHN, PSYCHOLOGICAL SCIENCE
 Abstract: Usability testing is a form of research that assesses a product or interface's ease of use, accessibility, and satisfaction as experienced by the target user. The present study measures these factors in the Steely Library website by providing users with a series of tasks that they must attempt to complete on the site. The results will indicate any points of frustration, which will inform our final suggestions for improving the website to make it a better experience for all users.

P-168 KELLY KRUMMEN

Improved Memory Retention and Recall using Criterion Learning Strategies.

FACULTY SPONSOR(S): KALIF VAUGHN, PSYCHOLOGICAL SCIENCE
 Abstract: Many college students do not use effective learning strategies. Ineffective strategies can make the process of learning material more difficult and cumbersome. The purpose of this study was to examine the effectiveness of various test trials. Participants studied anatomy charts and their corresponding terms. Then, participants were presented with an anatomy chart and had to recall the correct term. This proceeded until all items had been recalled once. Three types of test trials were used: consonants-only (sc_p_l_ = scapula), vowels-only (u_i_ = pubic), or standard test trials (_____ = tibia). Memory was assessed after a 2-minute distractor.

P-169 KALA SWIM

The Results of Hyperamnesia on Processing Information and Eyewitness Identification.

FACULTY SPONSOR(S): KALIF VAUGHN, PSYCHOLOGICAL SCIENCE
 Abstract: According to the Alternative Retrieval Pathways (ARP) hypothesis, hypermnesia (an increase in memory performance across a delay) results from a combination of different processing formats (e.g., visual and verbal). We investigated ARP and eyewitness memory. We had participants watch a video of a crime. Then, participants either did nothing, rewatched the video, arranged snapshots of the video in chronological order, or recalled the video. According to ARP, the group of participants verbally recalling the video should show hypermnesia on a delayed test.

P-170 TATIANA PARADELLA-BRADLEY

The Effects of the NMDA NR2B Subunit Antagonist Ro 63-1908 on Impulsive Choice is Modulated by the Order in which Delays are Presented

FACULTY SPONSOR(S): JUSTIN YATES, PSYCHOLOGICAL SCIENCE
 Abstract: We examined the contribution of the glutamate NMDA NR2B subunit antagonists Ro 63-1908 (0-1.0 mg/kg) and CP-101,606 (0-3.0 mg/kg) to impulsive choice. Ro 63-1908 (1.0 mg/kg) increased impulsive choice when the delay to reinforcement decreased across the session, but had no effect on delay discounting when the delays increased across the session. CP-101,606 did not affect delay discounting. These results show that the order in which delays are presented can modulate drug effects in delay discounting procedures.

P-171 HUNTER CAMPBELL

Effects of the Glutamate NR2B Subunit Antagonist Ro 63-1908 on the Acquisition and Expression of Methamphetamine Conditioned Place Preference in Adult, Male Rats

FACULTY SPONSOR(S): JUSTIN YATES, PSYCHOLOGICAL SCIENCE
 Abstract: We determined if Ro 63-1908 is effective in attenuating the rewarding effects of methamphetamine (1.0 mg/kg) using the

conditioned place preference (CPP) paradigm. In CPP, rats learn to associate one environmental context with drug reward. In the acquisition experiment, rats were treated with Ro 63-1908 before receiving each methamphetamine injection. In the expression experiment, rats received Ro 63-1908 before the post-session (when rats were in a drug-free state). Results showed that Ro 63-1908 (1.0 mg/kg) tended to inhibit the acquisition, but not expression, of methamphetamine CPP. We are currently testing a higher dose of Ro 63-1908 in the acquisition experiment.

P-172 ALESSA RULLI, JENNIFER MILLER

Preliminary Results from 2017 NKU Excavations at the Glacken Site (15Be272), Big Bone Lick State Historic Site

FACULTY SPONSOR(S): THADDEUS BISSETT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Big Bone Lick State Historic Site is famously known as "the birthplace of American paleontology." However, work by NKU's 2017 Archaeological Field School at the Glacken Site, a Late Archaic (5700-3200 BP) and Early Woodland (3200-2300 BP) prehistoric archaeological site located on the park's property, revealed rich archaeological potential for understanding the lives of prehistoric peoples of this area. Artifacts found at Glacken during the field school include lithic tools, animal bones, and shell. Our analysis of these materials provides information about human occupation at the site during the Late Archaic and Early Woodland periods.

P-173 ANGELIQUE COLLINS, ANDREA BRIDGES

Pockoy Island: Preliminary Exploration of South Carolina's Oldest Shell Ring

FACULTY SPONSOR(S): THADDEUS BISSETT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Late Archaic shell rings are a unique type of archaeological site found on the U.S. Southeastern coast. They are prehistoric circular shell middens that surround generally bare areas. NKU archaeologists recently discovered the oldest shell ring in South Carolina, located on Pockoy Island. Radiocarbon dates reveal that its construction occurred between 4400 and 4300 years ago. Today, the ring is being eroded by rising sea levels and severe storms. Our research will help to discover the types of human activity that occurred within the ring, and provide a deeper understanding for how Archaic peoples interacted with the environment around them.

P-174 ALEX VEST

The Sociology of Hurricane Katrina

FACULTY SPONSOR(S): NICOLE GRANT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Hurricanes have devastated many parts of American society. The loss of property and/or loved ones is life changing for many people. However, what are the long term consequences of hurricanes on public health? This poster will discuss the public health consequences that citizens in New Orleans have collectively experienced. Based on research that I have done, there seems to be higher rates of poverty, infant mortality, and water pollution in the city after Hurricane Katrina and above the national average. Due to these correlations, I would argue New Orleans is a toxic community.

P-175 AUTUMN BAKER

Electronic Waste: How Our Culture Impacts E-Waste in Developing Nations

Faculty Sponsor(s): Nicole Grant, Sociology, Anthropology & Philosophy

Abstract: Our culture is based on consumerism. Most electronics today are designed with planned obsolescence, forcing us to buy more electronics than ever before. This has a huge impact on e-waste and where it ends up. Most electronic waste is shipped to developing nations, where poor populations survive by sorting

through these discarded electronics to either use or sell. This has huge environmental and public health effect, especially to the populations that are affected first-hand. My presentation will focus on how our culture contributes to the large amount of e-waste being exported to developing nations and the effects this creates.

P-176 RACHEL SIZEMORE

Social Issues among Arapaho and Shoshone on Wind River Reservation

FACULTY SPONSOR(S): NICOLE GRANT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: The Arapaho and Shoshone of Wind River are a people who have faced many side effects of the social trauma inflicted upon them by the American government, most of which has been silenced and ignored by public media. Families are routinely exposed to poverty, mental and physical health concerns, and cultural dissolution. To fully understand the social issues faced by individuals on Wind River today, this study seeks information from the residents themselves, utilizing social media and reservation newspapers. This paper will not only shed light onto these issues, but also onto the work being done on the reservation.

P-177 LAURIE HAUGH

How can Students Eat Healthy on a Budget?

FACULTY SPONSOR(S): NICOLE GRANT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Eat healthy on a budget was the end result for my research. If the single/student had enough money to purchase food what should they get with limited funds? If they are on food stamps, what would be the best way to use the \$125 they would get per month? My poster shows many different ways to cook healthy meals on a budget, where to buy food, and where to go when they run out.

P-178 AUTUMN GILBERT

Social Problems and Activism on the Gila River Reservation

FACULTY SPONSOR(S): NICOLE GRANT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster will show connections between the specific social problems that affect the Native American people of the Gila River Reservation in Arizona, as well as what is being done to alleviate the problem. In the research of the solutions to the social problems, emphasis is placed on what the people of the reservation are doing to address the problem, rather than what society as a whole is doing.

P-179 MALLORY EILERMAN

Survey of Impacts of the Internet on Online Health Care Information and Self-Diagnosis

FACULTY SPONSOR(S): YUSHI LI, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: As technology is becoming increasingly advanced, people are having increased access through the Internet to sources of information for a variety of topics. This research is to collect data on people's attitudes towards online medical information and self-diagnosis using a questionnaire. There will also be a comparison between the attitudes of different age groups to see how it impacts levels of trust in doctors versus trust of online information. According to previous studies, younger people and females were found to use the Internet for medical information more than any other groups, this study seeks to expand understanding on this phenomenon.

P-180 CATHERINE REDDEN

Celtic Consciousness: The Cultural Landscape of Legend

FACULTY SPONSOR(S): MICHAEL SIMONTON, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: The Celtic culture is one steeped in myth and legend. From their stories and the archaeological evidence that the prehistoric Celts left behind, we can infer their key characteristics and beliefs, powerful connections with the natural landscape, values of honor and devotion, and sacred triplicity, as exhibited through their gods, heroes, and druids. By drawing associations between the old and the new, we can define the themes that have passed the tests of time. These themes have been preserved not only in literature, but woven into modern Celtic culture with an influence that has transcended even international borders.

P-182 KASEY BURTON

Bullittsburg Baptist Church

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY; DENISE KNISELY, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY
Abstract: The historic site of Bullittsburg Baptist Church is located in Boone County, Kentucky. This building, first established in 1794, is the first organized church of any kind in Northern Kentucky. Throughout its past, renovations, events, and church members have all shaped the growing community around it making it a local treasure. While services are still held, this poster is going to focus on the history of the site including when and how it was first established and later added on to and its contribution to the creation of neighboring churches and the growth of African American worshipers in the area.

P-183 AMBER CAINES, KASEY BURTON

Move Over Columbus: Viking Occupation in North America

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster presented information regarding the Viking's earlier settlement of North America. This research began with their homeland of Europe and their desire to discover new lands to obtain trade goods. The new lands they

first encountered were Iceland, Greenland, Newfoundland, and the northern U.S. Here they practiced pastoralism and walrus hunting. Evidence is found in Viking sagas, Native folklore, and archaeological excavation. The Vikings were not successful but they could have been if they learned to adapt.

P-184 DEE BROOMHEAD

*Preliminary Analysis of Adolescent and Adult Female Social Bonds in Bonobos (*Pan paniscus*)*

FACULTY SPONSOR: MONICA WAKEFIELD, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

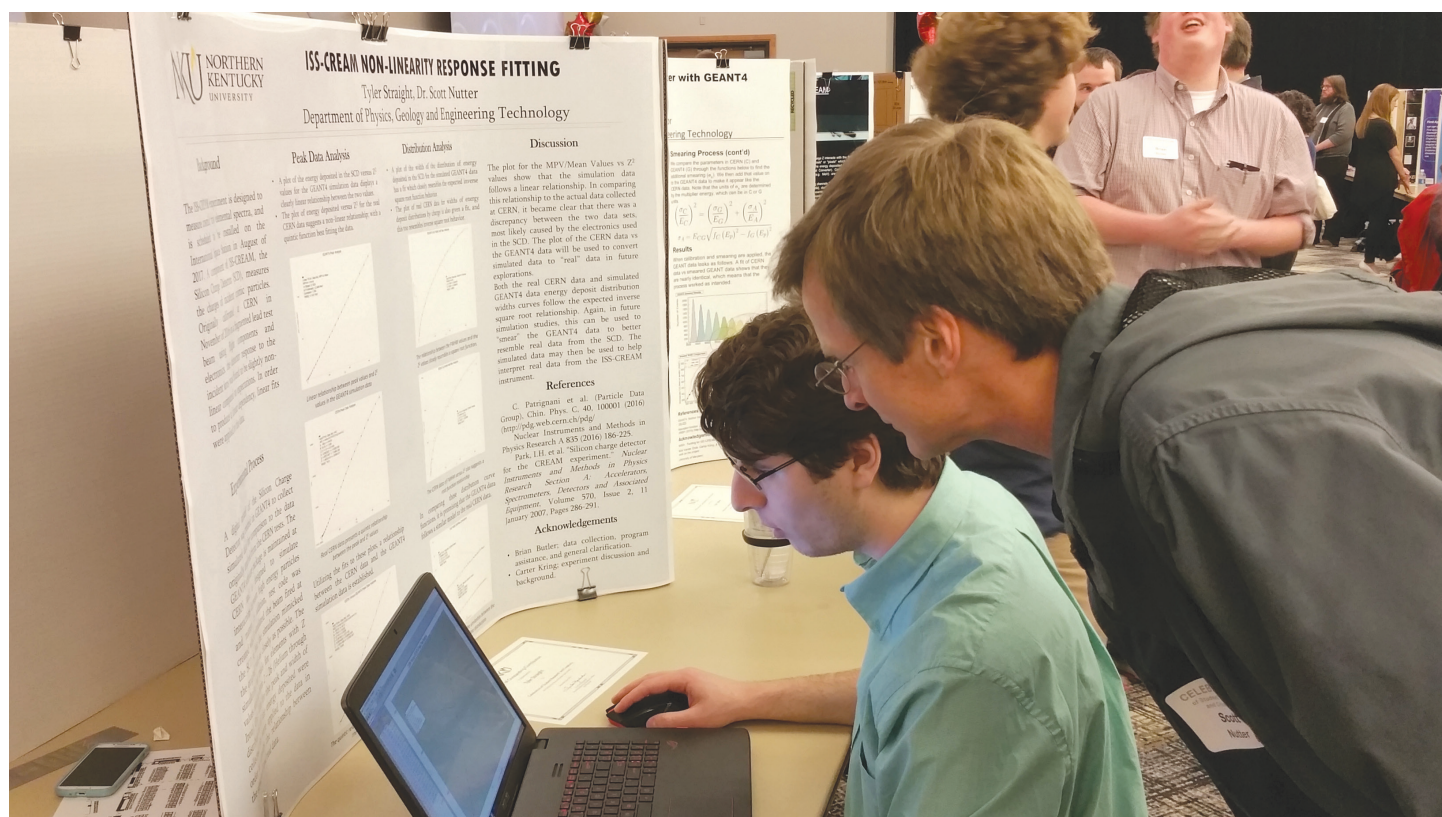
Here I present preliminary research on social relationships between adolescent and dominant adult female bonobos (*Pan paniscus*) at the Cincinnati Zoo. Adolescents typically bond closely with a specific senior female (SSF) who facilitates the transition into adulthood. The zoo has three adolescent females with varying existing relationships to the group, which presents the opportunity to investigate the significance of bonding and social affiliations in the process of being recognized as an adult in a social group and integration into the social hierarchy. I examine the correlation between hierarchical standing of the SSF and social success of the adolescent female.

P-185 HEATHER MARTIN

German Colonial History and its Impact on National Identity

FACULTY SPONSOR: NANCY JENTSCH, WORLD LANGUAGES & LITERATURES

Germany's national identity is primarily dominated by the histories of the two World Wars, the Holocaust, and the Cold War. However, as Europe's fifth largest colonial power, Germany's colonial history plays an important role in the history of its national psyche. After the overseas territories were lost during World War I, colonial memory significantly shaped domestic politics and nationalism. This poster explores the evolution of German nationalism and national identity in the context of



STUDENT PARTICIPANTS

STUDENT NAME.....PROJECT(S)

A

Adams, Samuel..... P-7
Aichele, Latoya..... P-63
Aiuto, Ian P-101
Alderson, Stephanie P-35
Alhajri, Fahad P-136
Alwafi, Doaa P-42
Ammerman, Alex P-11
Ammons, Terrin P-38
Ayala, Noe P-128

B

Bailey, Jessica P-137
Baker, Autumn P-175
Bales, Regan O-6, P-19
Barker, Hannah..... I-1
Barnett, Lindsey P-86
Bellocq, Alex P-33
Berter, Hannah P-147
Bliss, Jozephine P-112
Bond, Breanna..... P-9
Boyers, Sage..... P-113
Brandner, Amanda O -16
Bridges, Andrea P-173
Britt, Charles P-128
Brooks, Jennifer O-2
Brooks-Jeffiers, Zoe O-13
Broomhead, Dee P-184
Brown, Dustin O-15
Browning, Nicole P-38
Brownlee, Karen P-95
Bryant, Lindsey P-68
Burchett, Jamison O-6, P-22
Burton, Kasey P-182, P-183
Byrns, Carter P-127

C

Caines, Amber P-183
Caldwell, Michael P-142
Callahan, Lexie P-33
Campbell, Hunter P-171
Carrino, Maggie..... P-121, P-154
Cason, Lindsay..... P-163
Caudill, Shelby..... P-5
Ceilidh, Ahearn P-24
Chadwell, Daniel P-104
Chappell, Tamika P-5
Chervus, Sylvia..... P-33
Childers, Georgia P-129
Chitwood, Marissa P-160, P-166,
P-170
Clay, Nicole O-19
Cole, Hayley P-96
Coleman, Ali P-65
Collini, Sara P-67
Collins, Angelique P-173
Comberger, Kody P-128

Conaway, Rachel P-4
Conklin, Kelly P-35
Cook, Brittany P-109
Cooper, Allison..... P-154
Cooper, Rachel..... P-41
Couch, Anthony P-126
Cox, Debby P-99
Coy, Zadah P-8
Cracchiolo, Michael P-24
Cramer, David A-3
Cross, Loretta P-102
Crout-Mitchell, Angela P-143

D

Daugherty, Kathryn P-66
Davis, Donald P-13
Davis, Samantha P-151
Day, Haley P-170
Decker, Chris P-122
Decker, Zane P-142
Diener, Shelby P-1
Diol, Diado A O-21
DiVita, Daisy O-3, P-18
Donell, Samantha P-167
Downen, Tyler..... P-159
Driehaus, Rachel P-132
Dufek, Sally P-132
Dunbar, Chad O-17
Duncan, Samantha P-130
Dunn, Amanda P-146

E

Eaton, Emily O-14
Edmunds, Robert P-56
Edwards, Kiersten P-33
Eilerman, Mallory P-179
Elery, Zaria O-4
Ellis, Savannah P-60

F

Faller, Tim P-138
Farmer, Alyssa P-131, P-134
Farrell, Patrick P-130
Farro, Laura P-131
Feghali, Anthony P-142
Fibbe, Jessica P-39
Figueroa, Patricia P-89
Finn, Kirsten P-90
Fitzpatrick, Ryan P-7
Folsom, Matthew P-132
Fox, Stephanie P-160
Frey, David P-150

G

Galluzzo, Keely P-110
Garman, Sheri P-100
Garvey, Chelsea P-145
Garvey, Kelley P-73
Gearhart, Colton P-133

Gilbert, Autumn P-178
Gillespie, Presley P-88
Gilreath, Hannah O-2
Godavarti, Bharat P-46, P-50
Goodrich, Sarah P-8
Groeschel, James P-139
Gurram, Vinay P-47
Guy, Adrian P-22

H

Hamann, Chris P-69
Handrich, Heather P-33
Hansen, Mitchel P-42
Harbin, Brianna P-135
Hartman, Colin P-8
Haugh, Laurie P-177
Hauser, Chelsea P-116
Hawkins, Keila P-106
Heidel, Jonah P-170
Henderson, Brie P-130
Heppler, Ben P-31
Hering, Trisha P-55
Hicks, Rebecca P-91
Hopkins, Sarah P-160, P-170
Horning, Jordan P-123
Horstman, Ruth O-12, P-116
House, Olivia P-34
Howard, Gabe P-16
Howie, Marcellus P-33
Hrabosky, Seth P-34
Hunt, Kayla P-98
Hyde, Sara P-77

I

Istre, Hannah P-31
Ivey, Zack P-138

J

Jefferson, Nick P-163
Jenkins, Brandon P-130
Johnson, Nathan P-29
Jones-Lyons, Jenna P-74

K

Kain, Parker..... P-48
Kalfas, Charlotte O-11
Kiggins, Marques P-128
Kilburn, Julia P-84
Kinser, Steven P-129
Koch, Samuel P-12
Koop, Richard P-49
Kresnak, Matthew P-149
Kring, Carter P-140
Krummen, Kelly P-162
Kuhlmann, Amanda P-111
Kunkel, Stephanie P-103
Kunkler, Sarah P-10

L

LaBree, Tyler P-141
Lackey, Olivia P-130
Lanada, Junessa P-2, P-5

Lange, Mitchel P-8
Legters, Kate P-164
Leininger, Bailey P-135
Lindner, Jacob P-137
Lindsay, Kara P-25, P-26, P-29
Lingao, Brie P-164
Lorenz, Sierra P-117, P-156
Lotterer, Lizzie A-6
Lowe, Greta P-5

M

Maddox, Christopher P-148
Mamaril, Justen..... O-6, P-19
Manley, Mackenzie P-122
Marples, Katelyn P-97
Marsh, Jenny O-18
Martin, Dan P-139
Martin, Heather P-185
Mason, Donniesha P-6, P-7
Massie, Lisa P-5
Mayerik, Mackenzie P-87
McCarty, Rhett I-3
McCullough, Erica P-154
McGregor, Meghan P-79
McMain, Dillon I-1
McMillen, Lauren O-5
McNew, Samantha..... P-38
Meader, James P-38
Mearns, Clare P-162
Melsin, Elgin P-78
Mertle, Molly P-129
Miller, A.J. P-41
Miller, Christian P-152
Miller, Janiah..... P-144
Miller, Jennifer P-172
Milligan, William A-5
Monahan, John P-53
Moore, Cody O-8
Moreton, Sara P-119
Morgan, Hunter..... P-6, P-7
Mullins, Erin P-41
Muncie, Brittany P-170

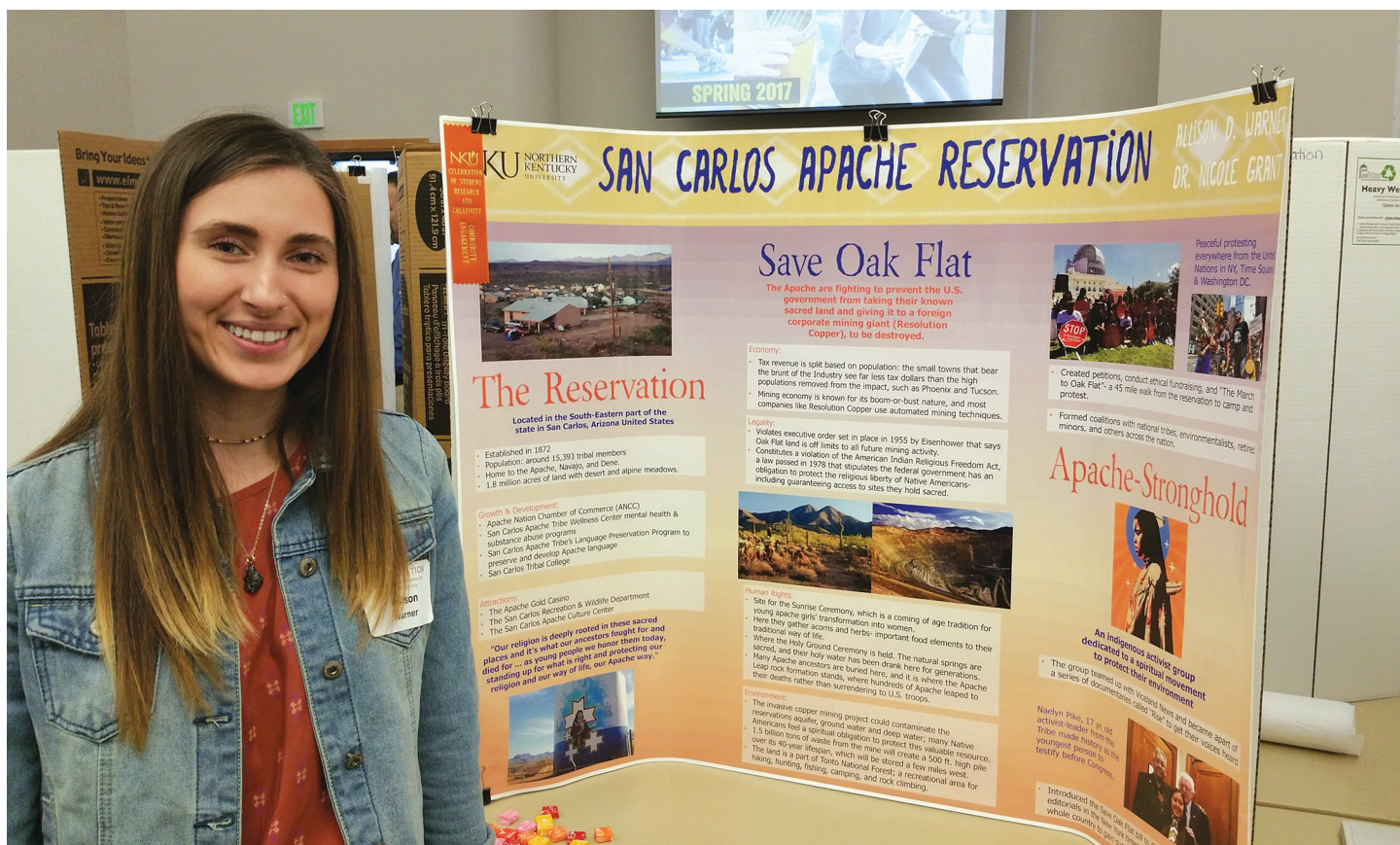
N

Nassida, Matthew A-6
Neiser, Matthew P-25, P-29, P-30
Newberry, Ashley P-105
Ney, Caressa P-163
Nguyen, Quynh P-25, P-28, P-29
Nizampuram, Anudeep P-45
Noland, Lyndsey P-37

O

O'Connor, Gregory..... P-18
Odhiambo, Donna..... O-7
Okoronkwo, Chioma P-33
Olivan, Alex P-24, P-137, P-139
Oliverio, Dominic P-128
Olson, Roger P-138
Onate, Sandra P-31
Oster, Emily P-164

P		
Paradella-Bradley, Tatiana.....	P-162,	Reynolds, Carisa P-62
	P-170	Richardson, Keri..... P-153
Parks, Brianna.....	P-24	Robinson, Florence P-85
Paruchuri, Venkat P-45, P-51		Robinson, Shakeyilea P-61
Patel, Raj P-24		Rodriguez, Sandy..... P-57, P-64
Pendley, Rose P-40		Roenker, Ben P-138
Petty, Taylor P-75		Roll, Sydney P-37
Pfalz, Cooper P-114		Rosen, Alex P-25, P-27, P-29
Phillips, Samantha P-164		Rosenstiel, Samuel P-38
Plunkett, Andrew P-52		Roy, Ayanav P-25
Porter, Zorada O-11		Ruebusch, Kennedy P-37
Powell, Barbara P-43, P-49		Ruwe, Dominic P-23
Powers, Reagen P-32		
Pradhan, Monika P-51		S
Prather, John Clay P-120		Said, Mohamed P-50
Prattipati, Manoah..... P-46, P-50		Saner, Stephanie P-24
Prickel, Kelsey P-81		Satterley, Dustin P-157
Probst, Logan P-58		Sawvell, Katie P-159
		Schaefer, Emily P-36
		Schille, Andrew P-124
		Schmitt, Abby P-34
		Schubarth, Lydia P-156
		Schultz, Nicklaus P-38
		Sellet, Joelle P-70
Q		Sestito, Alexandra..... P-170
Quillen, Andrew..... P-25, P-29		Setty, Alana P-38
		Shitov, Alexey P-44, P-49
		Shiverdecker, Andrea..... P-114
R		Sidle, Chasity P-59
Rabe, Justin P-23		Siefert, Hannah P-36
Rahim, Brandi P-107		Sizemore, Hannah O-3, P-20
Raines, Jessica P-161		
Ramirez, Stephen P-29		Sizemore, Rachel P-176
Rawlings, Dejah P-155		Skinner, Sarah P-14
Redden, Catherine..... P-180		Slack, Brendan P-16
Reynolds, Ben P-118		Smedley, Atley P-36
		Smith, Jordan P-92
		Spigelmyer, Sarah P-21
		Spjut, Nichole P-108
		Srivatsa, Neha P-165, P-167
		Stephenson, Sam A-4
		Stone, Tamara P-83
		Storer, Caroline..... P-76
		Straight, Tyler P-140
		Sullivan, Sean P-129
		Swim, Kala P-169
		T
		Tapia, Tristan P-125
		Terry, Eli P-156
		Theders, Sam P-33
		Thomas, Maggie..... O-6, P-22
		Thompson, Emily P-94
		Tiemon, Liam P-15
		Triana, Reese..... P-6
		U
		Uhl, Kristin..... P-54
		Uthairat, Teerapong P-49
		V
		Van Gorden, Ashton P-72
		Vance, Liza P-115
		W
		Vecchiola, Ashley P-170
		Vest, Alex P-174
		Vicars, Emily P-33
		Villalona, Yislain P-3
		Virag, Mate P-17
		Y
		Yocum, Morgan P-93
		Young, Daisee P-38
		Z
		Zaccagnini, Kelsey P-82
		Zavislak, Jason P-129
		Zhang, Yao P-47
		Zheng, Zhihao P-47
		Ziebro, Julia P-21
		Zook, Angela P-164



FACULTY SPONSORS

FACULTY SPONSOR.....PROJECT(S)

A

Allameh, Seyed P-135, P-136
Averitt Taylor, Jessica P-53, P-54,
P-55, P-93, P-94, P-95, P-96, P-97,
P-98, P-99, P-100, P-101, P-102,
P-103, P-104, P-105, P-106, P-107,
P-108, P-109, P-110

B

Baranowski, Michael P-143, P-144
Bardgett, Mark P-159
Bertog Janet P-137
Bills, Patricia P-134
Bissett, Thaddeus P-172, P-173
Bonner, Tracey P-33
Boos, Brian P-123
Bowling, Bethany P-1
Breitenbecher, Kimberly.. P-160, P-161

C

Carmen , John O-2, O-3, P-20
Cenkci, Ada T. P-145, P-146
Cho, Sookyung I-2, I-3
Curran, Christine Perdan P-2, P-3,
P-4, P-5

D

Day, Michele P-122
Downing, Megan P-147, P-148

F

Fuegen, Kathleen P-160, P-161

G

Gazzaniga, Andrea O-11, P-112

Grant, Nicole P-174, P-175, P-176,
P-177, P-178
Guy, Michael O-2, O-3, O-6, P-18,
P-19, P-20, P-21, P-22, P-23

H

Hao, Wei .. P-13, P-43, P-44, P-45, P-46
Hare, Patrick O-7, P-24
Hart, Zachary P-34, P-35, P-36, P-37
Hatton, Michael A-5
Henry, Jill P-14, P-15, P-16, P-17
Holden, Lisa P-131, P-132
Hopfensperger, Kristy O-5
Hu, Yi P-47

J

Jankowski, Stacie P-38
Jentsch Nancy P-185
Johnson, Sarah P-138, P-139
Jones, Sharyn P-113

K

Kim, Suk-hee P-56, P-57,
P-58, P-59, P-60, P-61, P-62, P-63,
P-64, P-65, P-66, P-67, P-68, P-69,
P-70, P-71, P-72, P-73, P-74, P-79,
P-82, P-83, P-84, P-85, P-86, P-88
Knisely, Denise P-182
Kratzer, Jessica O-10
Kulkarni, Madhura P-134

L

Lagadic, Isabelle O-8
Landon, William P-113, P-114,
P-115, P-116
Lee, Austin P-39, P-40, P-41,
P-42

Li, Qi P-48
Li, Yushi P-179

M

Ma, Lili P-25, P-26, P-27, P-28,
P-29, P-30, P-31
Macke, Caroline P-56, P-57,
P-58, P-59, P-60, P-61, P-62, P-63,
P-64, P-65, P-66, P-67, P-68, P-69,
P-70, P-71, P-72, P-73, P-74, P-75,
P-76, P-77, P-78, P-79, P-80, P-81,
P-82, P-83, P-84, P-85, P-86, P-87,
P-88, P-89, P-90, P-91, P-92
Marczinski, Cecile P-162
Mester, Joseph P-6, P-7, P-8
Miller, Carl P-133
Moberg, Philip P-163, P-164

N

Nolan, Joseph P-133, P-134
Nutter, Scott P-140, P-141

O

O'Donnell, Kathryn P-75, P-76,
P-77, P-78, P-80, P-81, P-87, P-89,
P-90, P-91, P-92
Onorato, Amber P-32
Ozaki, Reiko P-53, P-54,
P-55, P-93, P-94, P-95, P-96, P-97,
P-98, P-99, P-100, P-101, P-102, P-103,
P-104, P-105, P-106, P-107, P-108,
P-109, P-110

P

Phizicky, Eric P-18
Pulos, Alexis I-1

R

Reynolds, Jonathan O-15, O-16,
O-17, P-117
Riffe, Holly P-111

Robertson, Brian A-6
Russell, KC P-33

S

Sadat, Morteza P-142
Salzman, Ryan O-21, P-149,
P-150, P-151, P-152
Sanders, Gabe P-123
Scheidler, Cory P-124, P-125,
P-126, P-127
Shifley, Emily P-9, P-10
Simonton, Michael P-180
Strawn, Jamey A-6
Strobel, Chris A-1, A-2, A-3, A-4
Strome, Erin P-11

T

Truta, Traian P-49, P-50, P-51

V

Vaughn, Kalif P-165, P-166,
P-167, P-168, P-169
Voelker, Judy P-182, P-183
Vogelpohl, Rachele P-128, P-129,
P-130

W

Wakefield, Monica P-184
Walden, James P-52
Wallace, Robert O-12, O-13,
O-14, O-20
Walters, Lindsey P-12
Wang, Hongmei P-138
Watkins, Andrea O-18, O-19,
P-118, P-119, P-120, P-121
Weir, Kimberly P-153, P-154,
P-155, P-156, P-157, P-158

Y

Yates, Justin P-170, P-171



CONFERENCE OF HONORS

TUESDAY, APRIL 17, 2018

PRESENTATIONS WILL BE HELD IN UC 135

9:25-10:40 a.m.

Emily Ann Israelson (Jonathan McKenzie)

Constructing the State: How Myth Shapes Political Identities

Robert Davis (Shauna Reilly)

Examining Modern Attempts of State Secession in the U.S.

Reva Short (Nicholas Brummer)

RPG Game Design

10:50-12:05 p.m.

McKenzie Eskridge (Joan Ferrante)

Major Concerns: Why Did I do College?

Marissa R. Chitwood (Kalif Vaughn)

*Cognitive Performance and Background Noise:
The Effects of Pink Noise on Performance*

Celeste Shearer (Andrea Lambert-South)

Childhood Friendships and their Impact on Adulthood

12:15-1:30 p.m.

Hannah Gilreath (John Carmen)

Endophytic Fungi and its Potential Use in Antibiotic Drugs

Sally Dufek (Michael Waters)

The Detection of Harmful Algae Blooms

Sabrina Anglin (Ali Godel)

Inside NKYDC

1:40-2:55 p.m.

Nikole Seay (Nana Arthur-Mensah)

*Pursuing an American Education: How the Migration Process Influences International Students
Adapting to Life on an American Campus*

Madison Overwein (Kayla Steltenkamp)

Mental Health: Hope through Education

Christian Carey (Jonathan McKenzie)

A Philosophical Look at Mass Incarceration

3:05-4:20 p.m.

Heather Handrich (Tracey Bonner)

Impact of Dance on People with Disabilities

Austin Mayfield (John Alberti)

Pop Cultural Exchange between the United States and Japan

James Stone (Sara Drabik)

Diary of the River God

CONFERENCE OF HONORS

WEDNESDAY, APRIL 18, 2018

PRESENTATIONS WILL BE HELD IN SU 104

9:00-9:50 a.m.

Alysia Bauer (Hans Schellhaus)

Making a Typeface: An Exploration of Type Design

Sydney Renner (Marcos Misis)

Female Serial Killers in the United States

10:00-10:50 a.m.

Ruth M. Horstman (Michael Washington)

Alphonso Taft: Cincinnati's Forgotten Social Reformer

Noah Love (Sarah Johnson)

Introduction to Geology

11:00-11:50 a.m.

Madison Cobb (Belle Zembrodt)

Undergraduate Mindfulness Course Effects on Coping with Stress

Courtney Taylor (Lisa Holden)

Art, Territories, and Tours through Optimization

12:00-12:50 p.m.

Rachel LeDuc (Judy Voelker)

Society, Medicine, and the Individual

Daniel Martin (David Kime)

A Walk through Geologic History

1:00-1:50 p.m.

Laurel Ellis (Kristin Hornsby)

All and Nothing: A Study of Asexuality Representation through Playwriting

Benjamin J. Cecil (Amber Onorato)

Synthesis of Novel Diarylhexanoids for Targeted Treatment of Inflammation

2:00-2:50 p.m.

Regan Bales (Perilou Goddard)

Hydromorphone as an Alternative Medication-Assisted Treatment Option for Heroin Use Disorder

Haley Day (Angela Lipsitz)

How Schizophrenia Is Portrayed In Films Purportedly About Schizophrenia

CONFERENCE OF HONORS

THURSDAY, APRIL 19, 2018

PRESENTATIONS WILL BE HELD IN SU 104

9:25-10:40 a.m.

Grace Francomb (Kajsa Larson)

Teatro por el cambio

Nicole Erb (Jessica Taylor)

An Explanatory Exploration of the National School Lunch Program

Catherine Tuttle (Justin Yates)

The Effects of Music on Alzheimer's Disease Symptomatology

10:50-12:05 p.m.

Hayley Emmerich (Andrea Lambert South)

Makeup and its Meanings

12:15-1:30 p.m.

Keith Privé (Miriam Steinitz-Kannan)

Bacteria Biofilms on Contact Lenses and a Health Informatics Solution

Elizabeth Martin (Jessica Hindman)

Virgins, Victims and Victors: Exploring Women's Sexuality through Creative Nonfiction Writing

Zulma Rosales (Lisa Jameson)

Looking at Human Compassion and Care Through

1:40-2:55 p.m.

Marisa Yerace (Jennifer Cellio)

Intersections of Rhetoric and Place

Emily C. Baltes Thompson (Mark Bardgett)

A Comparison of Two Antipsychotic Drugs on Behavioral Development in Rats

Maria Smal and Casey Pape (Marie Wise)

Increasing Parental Presence and Kangaroo Care in the Neonatal Intensive Care Unit

3:05-4:20 p.m.

Paige Coble (Paige Byam Soliday)

Love is Broken

Hunter L. Campbell (Justin R. Yates)

Contribution of NMDA NR2B Subunit to Methamphetamine Conditioned Place Preference

Sarah Kunkler (Emily Shifley)

FGF and RA Signaling Pathways Interact During Development of the Xenopus Pharynx

SPECIAL THANKS TO...

ZACH HART**	JENNIFER RICHMOND*
TAMARA O'CALLAGHAN**	KC RUSSELL*
SAYED ALLAMEH*	RYAN SALZMAN*
RICK ENDRES*	MELINDA SPONG*
CANDACE GIBSON*	COLLETTE THOMPSON*
JANE HAMMONS*	ANDREA WATKINS*
MELANIE HARTZEL*	KIM WILEY*
ERIKA JAY*	DEBBIE HOLLON
SUK-HEE KIM*	VICKI CIOFFE
SAMANTHA LANGLEY*	COREY POWERS
BONI LI*	LEIGH OBER
SHAUNA REILLY*	NKU MARKETING AND COMMUNICATIONS

** Celebration Co-Chairs

* Celebration Committee Members

SPONSORED BY...

OFFICE OF THE VICE PROVOST FOR GRADUATE EDUCATION,
RESEARCH AND OUTREACH
INSTITUTE FOR STUDENT RESEARCH AND CREATIVE ACTIVITY
NORTHERN KENTUCKY UNIVERSITY RESEARCH FOUNDATION
COLLEGE OF ARTS AND SCIENCES
HAILE/US BANK COLLEGE OF BUSINESS
COLLEGE OF EDUCATION AND HUMAN SERVICES
COLLEGE OF HEALTH PROFESSIONS
COLLEGE OF INFORMATICS
CINSAM
HONORS PROGRAM
SOTA (SCHOOL OF THE ARTS)

