ANNUAL REPORT OF
UNDERGRADUATE RESEARCH FELLOWS

August, 2017 to May, 2018

COLLEGE OF BUSINESS AND TECHNOLOGY

SCHOOL OF BUSINESS ADMINISTRATION

Bennett, Sydney N.

Major:
Business Administration

Faculty Mentor:
Johnathan Nelson

Research/Project Title:
An Evaluation of Strategies used to Invite Participation in Ethics Training.

Project Abstract/Summary:
Recent ethical scandals have caused there to be more attention on organizations and how they manage ethical behavior, including through ethics training. Ethics training focuses on what motivates employees to behave and work ethically. The purpose of this research is to identify characteristics of invitations to ethics training that make employees more apt to complete the training when it is not required. Invitations to ethics training are one important influence on employee motivation related to ethics training. Specifically, we hypothesized that when ethics training is framed as a values versus compliance program, and when communications about ethics training emphasize the ability of people to change, that people will be more likely to complete ethics training and perceive it as more effective. We tested these hypotheses in a two by two experimental design to test all four conditions. We present our results and provide a discussion of how ethics training can advertise and communicated to employees to motivate their completion and participation in ethics training to improve its effectiveness.

Project Dissemination:
Bennett, S.N. & Nelson, J.K. (2018, April). An Evaluation of Strategies used to Invite Particiation in Ethics Training. Presented at the 2018 Annual Celebration of Student Scholarship, Morehead, KY.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Branham, Hunter

Major:
Business Administration

Faculty Mentor:
Janet Ratliff

Research/Project Title:
Entrepreneurial Intention: Born or Bred?

Project Abstract/Summary:

The purpose of this research study was to identify whether Craft Academy students choosing an entrepreneurship track and being exposed to an entrepreneurship curriculum will possess greater levels of leadership and entrepreneurial intention than those students not choosing an entrepreneurship track. The study was conducted with 60 Morehead State University Craft Academy students (attending 2015-2017) with varying interests in STEM related fields. The +X side of the curriculum in the STEM+X is a special feature of the Craft Academy that broadens and enriches the student's educational experience. Entrepreneurship, creativity and design, and civic and regional engagement are the three choices within the +X side of the STEM+X curriculum. This distinguishes the Craft Academy from other Academies like it across the nation. The entrepreneurship curriculum was a sequence of five courses. Students selected the +X area a of interest after exposure to all three in a First Year Seminar course in the first semester. The survey instrument used for this study was divided into related categories: demographics, leadership entrepreneurship intention, careers and ethics.

Project Dissemination:

Student, Branham, H. and Professor, Dr. Janet Ratliff, Dr. Johnathan Nelson (2018, April). Entrepreneurial Intention: Born or Bred? Poster, Celebration of Student Scholarship, Morehead, KY, April 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Once graduating, I plan on finishing my masters in business administration from Morehead State University. I am taking the June LSAT, with plans on enrolling into law school in fall 2019.

Curtsinger, Thomas A.

Major:

Business Administration

Faculty Mentor:

S. Ali Ahmadi

Research/Project Title:

The Role of High School GPA and ACT Score and its Components as a Predictor of College Success

Project Abstract/Summary:

The purpose of this study was to investigate the relationship between Student Success in college (Dependent Variable) with High School GPA as well as the scores in different components of the students' MSU GPA, as well as their scores on the ACT was solicited. A Multiple Regression model postulated Student Success (as determined by GPA as a function of their scores in ACT and High School GPA). The results are tabulated and reported to be in line with other studies conducted to determine which independent variables best predict college success as defined by college GPA. Both results of the ACT components were not significant. This latter result was attributed to inaccuracies and inconsistencies in students' reporting of their component scores.

Project Dissemination:

Curtsinger, Thomas A. and Professor S. Ali Ahmadi. (2018, April). The Role of High School GPA and ACT Score and its Components as a Predictor of College Success. Poster, Celebration of Student Scholarship, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Fink, Sarah

Major:

Government

Faculty Mentor:

Michael Hail

Research/Project Title:

Federalism and National Security: The Facebook Companies and Data Sharing – A Violation of American's Privacy

Project Abstract/Summary:

An examination of government organization and the relationship to national security will be the primary focus of this research. The focus of this research will be an examination of federalism and government organization for the intergovernmental issues concerning security of national interest and how government security agencies have authority to examine social media for terrorism and do governments at each level have the tools for it. The focus of this research is an examination of federalism and government organization for the intergovernmental issues concerning security of national interest and how social media relates to privacy and security policy. Facebook is the social media selected for examination in this initial phase of study. After analyzing Facebook's Data Policy and the policies of the companies owned and operated by Facebook, the privacy and implications for security were considered. There is a large amount of identifying and non-identifying data gathered on users. This data can be shared with other companies and creates a digital file of users intellectual and physical information. There are multiple policy implications for security from the results.

Project Dissemination:

Research findings were presented at the Annual 4th Kentucky Intelligence Colloquium at the University of Kentucky, the Kentucky Political Science Association, and at the Celebration of Student Scholarship.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Hensley, Christian S.

Major:

Sport Management

Faculty Mentor:

Steve Chen

Research/Project Title:

Student-Athletes' Perceptions of Females Serving as the Head Coach of Competitive Elite Male Sports

Project Abstract/Summary:

The recent coaching employment of Becky Hammon inspires the discussion of the potential of witnessing the first female head coach hired in men's professional basketball. Despite the presence of female leaders in many business and political realms, there is a lack of gender equality in the employment of female coaches in the male dominated sports based on 132 student-athletes' responses (70 males and 62 females). An exploratory competency, (2) preferential level of female coaches, (3) female coaches' unique traits and strengths, and (4) actual opportunities that females receive. In general, the responders moderately agree that females have the adequate abilities and knowledge as male coaches do to handle the coaching tasks. Overall, male respondents are not very comfortable about having a female head coach. In agreement with several findings, the researcher found that male athletes are more likely to show disrespect toward female coaches and question their desire to win. Additional constructive strategies were provided to support future females overcoming the perceived barriers for becoming a head coach.

Project Dissemination:

Hensley, C.S., & Chen, S.S. (2018, April). Student-Athletes' Perceptions of Females Serving as the Head Coach of Competitive Elite Male Sports. A poster presented at the 2018 Celebration of Student Scholarship, Morehead, KY.

Hensley, C.S., & Chen, S.S. (2018, April). Student-Athletes' Perceptions of Females Serving as the Head Coach of Competitive Elite Male Sports. Programs and Abstracts Celebration of Student Scholarship, 10. 37.

Hensley, C.S., & Chen, S..S. (2018, April). Student-Athletes' Perceptions of Females Serving as the Head Coach of Competitive Elite Male Sports. A paper presentation at the 14th Annual Sport Psychology Forum, Bowling Green, KY.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Peca, Carley

Major:
Business Administration

Faculty Mentor:
Johnathan Nelson

Research/Project Title:
Reflection for Moral Character Development

Project Abstract/Summary:
Moral character is defined as the disposition of individuals to think, behave, and feel in an ethical manner and consists of attributes that facilitate personal well-being. These personal attributes (character strengths such as integrity and humanity) are related to six different virtues: wisdom, courage, humanity, transcendence, justice, and moderation. Character-based leaders exhibit high ethical standards while also inspiring and developing the character of followers. Organizational leaders must develop high levels or moral character in order to maintain ethical behaviors as well as gaining trust for subordinates. A better understanding of how character is developed will allow leaders and other organizational members maintain their moral integrity to avoid hypocrisy, and thus be more effective. Reflection has been identified as an important influence on character development. In this inductive study we used qualitative data to better understand the role of reflection in the character development process. Participants were asked to share their experiences related to moral character reflection. We presented initial findings from this data to provide insight into when moral/character reflection occurs and how it facilities character development. Implications for character-based leadership development will be discussed as implications. This research was supported by the MSU Undergraduate Research Fellowship Program.

Project Dissemination:
Peca, C. & Nelson, J.K. (2018, April). Reflection for Moral Character Development. Presented at the 2018 Annual Celebration of Student Scholarship, Morehead, KY.

Peca, C. (2018, April). Developing and Maintaining Character in Organizations. Presentation given to the School of Business Administration at Morehead State University.

Awards and/or Honors:
Selected for the USA National Cheerleading Team. We competed against 11 countries and earned a silver medal.

Post-Graduation Plans (Seniors only):
N/A

SCHOOL OF ENGINEERING AND INFORMATION SYSTEMS

Anderson, Brenton

Major:
Design and Manufacturing

Faculty Mentor:
Jorge Ortega-Moody

Research/Project Title:
Design and Development of a Self-Regulating Tower Garden and Design and Development of an Autonomous Tractor System

Project Abstract/Summary:
The research projects had essentially the same goal, to test and expand on the research assistant's abilities with CAD software as well as expose them to new aspects in engineering such as programming and electrical control While the research was based around design aspects there were times that the researcher was pushed to utilize these new tools to solve problems that were encountered within the projects. The tower garden was intended to utilize aeroponics as well as concentrated nutrients in order to shorten the growing time in several different plants. The Tractor system was intended to offer a hands free option to operators in order to reduce on fatigue and increase safety when operating the vehicle for a long period of time.

Project Dissemination:

Oral Presentaions:

Anderson, B. (2018, April). Design and Development of an Autonomous Tractor System. Celebration of Student Scholarships, Morehead, KY.

Anderson, B., Holbrook, K., Keene, L., & Steele, R. (2018, March). Chinampa Gardens, Idea State U Regional Competition, Morehead, KY.

Anderson, B., Holbrook, K., Keene, L., & Steele, R. (2018, April). Chinampa Gardens. Idea State U State Competition, Lexington, KY.

Awards and/or Honors:

Idea State U Regional Competition: The research team along side the business team (College of Business Students) received a top five placement earning the team the right to compete at the state competition one month later.

Morehead's Celebration of Student Scholarships: The research presentation earned the Exceptional Merit Award for the department of Engineering Technology.

Post-Graduation Plans (Seniors only):

N/A

Bowling, Jonathan

Major:

Construction Management and Civil Engineering

Faculty Mentor:

Sahar Gahnem

Research/Project Title:

An Investigation of the Mechanical Properties of Concrete with Microfibers

Project Abstract/Summary:

Concrete is a material on which most all structures are constructed. Beneath every stable structure is a solid foundation, one made of concrete. Concrete has the innate ability to withstand high compressive forces; however, it does not possess the same strength against tensile forces. To compensate for this lack of ensile strength, steel rebar is often used. In addition to steel rebar, the use of microfibers in the design of concrete are becoming a topic of interest. During this investigation two concrete samples are designed. One unreinforced concrete sample and another reinforced with carbon microfibers. Samples are then put through various tests. Including tests for workability, compressive strength and tensile strength. The results of these tests compared the values determined for the samples reinforced with carbon microfibers to those of the unreinforced sample. Utilizing the results of these tests can give us a better understanding of the effects of adding different microfibers to concrete. This done in the hopes of producing new innovations in the design of concrete. Innovations that will allow the use of better designed concrete for safer construction in the community. This research has been funded through an Undergraduate Research fellowship. To date, data has been collected on mixes Mo, Mo.5, M1, and partial date for M2. Testing will be completed before the end of the semester and full analysis of this data will then be possible.

Project Dissemination:

Bowling, Jonathan W. (2018, April). An Investigation of the Mechanical Properties of Concrete with Microfibers. Poster, Celebration of Student Scholarship, Morehead, KY, April, 2018.

Awards and/or Honors:

Certificate of Merit, Celebration of Student Scholarship, College of Business and Technology, Morehead State University, April, 2018.

Post-Graduation Plans (Seniors only):

N/A

Edlin, Michael T.

Major:

Design and Manufacturing Technology

Faculty Mentor:

Jorge Ortega-Moody

Research/Project Title:

Design and Manufacturing of a Complex Delta Robot Design that uses More Interactions with 3D Printing, Electronics, Programming, and Machining

Project Abstract/Summary:

Delta robots have positioned themselves in industry as a solution to tasks that require high speed and precision especially in the area of packing, inspection and assembly. Currently MSU does not have a robot of this nature which is a great limiting factor in the training of students. For this reason, the design and construction of a Delta-Robot is necessary for educational purposes. The purpose of this project is for the new delta robot to act as the training platform for students taking classes in the department of Engineering and Technology Management in the following areas: Electronics, Control, Automation, Computer Sciences and Mechanics. With this new development the students will have better practical training with these types of mechanisms and thus will possess a broader vision of the challenges they can be expected to face in industry. The redesign of the robot allows new improvements to insure full functionality without any complex issues.

Project Dissemination:

Oral Presentations:

Peer review through professionals by submitting paper to the Association of Technology, Management, and Applied Engineering (ATMAE).

Presenting poster at Kentucky Academy of Science.

Presenting poster in the MSU Celebration of Student Scholarship, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Good, Patrick

Major:

Design and Manufacturing Engineering Technology

Faculty Mentor:

Kouroush Jenab

Research/Project Title:

Developing a Non-Classical Model for Design for Reliability (DfR) in Systems of Systems (SoS)

Project Abstract/Summary:

We are working in the field of Systems of Systems related to the evolution and reliability of Systems of Systems and the connections between the individual systems within the SoS. My part of this has been to obtain a list of references that are meant to show the development of the field of System of Systems, with emphasis on more recent developments. I worked with Ray Bailey, the Engineering and Technology management department liaison, and the research staff at the Morehead State University Library to learn how to find the right databases to search, and how to conduct that search. Using keywords such as “System of Systems”, “evolution” and “reliability,” I made a short list of 20 references from peer-reviewed journals, all but one of which had the entire article available to me online. I read those references, discarded several, and made a 2 or more-sentence summary of the remaining articles to use in the introduction. Because the automatic citations for the articles were in various formats, I changed them all to APA citation format with a PowerPoint provided by Dr. Jenab as a guide.

Project Dissemination:

A research paper is in development phase.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Hansford, Amanda

Major:

Computer Science

Faculty Mentor:

Heba Elgazzar

Research/Project Title:

Machine Learning in Breast Cancer Detection

Project Abstract/Summary:

Breast Cancer is a very real, and potentially fatal, issue many people face. The best way to help these individuals is to detect the disease as early as possible so we can increase the likelihood of remission. As a part of this fellowship, we used multiple machine learning algorithms to analyze clinical cases of both breast cancer and potential breast cancer. The goal was to compare the different methods, along with their results, to see how accurately machine learning can recognize cancerous tissue and differentiate it from abnormal non-cancerous tissue.

Project Dissemination:

The fellowship began in the Spring semester and at this point we have classified the data using K-Nearest Neighbors (KNN) classifier, Support Vector Machine (SVM) classifier, and naïve Bayes Classifier with an accuracy of 96.5%, 96%, and 95.4% respectively.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Perkins III, Patrick C.

Major:

Design and Manufacturing Engineering Technology

Faculty Mentor:

Kouroush Jenab

Research/Project Title:

Using Artificial Intelligent and Virtual Reality for Fault Detection and Monitoring

Project Abstract/Summary:

1. Worked on preparations of some scenarios.
2. Learned 3Ds Max for engineering maintenance scenarios.

Project Dissemination:

A research paper is in development phase.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Razor, William

Major:

Government

Faculty Mentor:

Michael Hail

Research/Project Title:

Federalism and Homeland Security: Examining Public Management of Security Policy in the U.S. System of Intergovernmental Relations

Project Abstract/Summary:

An examination of state and local government organization and the relationship to national security will be the primary focus of this research. Exploring the operation and relationship of intergovernmental organizations in the policy process will include exploring cases and building data on interagency organization and policy and regulatory interactions. These will be assessed comparatively within the U.S. system of federalism.

Project Dissemination:

Research findings were presented at the Annual 4th Kentucky Intelligence Colloquium at the University of Kentucky, the Kentucky Political Science Association, and at the Celebration of Student Scholarship.

Awards and/or Honors:

Selected as one of the best research projects for a special panel at the 3rd Annual Kentucky Intelligence Colloquium.

Post-Graduation Plans (Seniors only):

Attend law school at the University of Louisville.

Sharma, Binamrata

Major:

Computer Science

Faculty Mentor:

Heba Elgazzar

Research/Project Title:

Content-Based Image Retrieval

Project Abstract/Summary:

For the content-based image retrieval we use a query image to retrieve images that share similar contents with the query images. In my research, I have used colors and edges as a basis of similarity between two pictures. Based on the colors and edges from my query image, my algorithm will detect images in a dataset that share similar colors and edges as that of query images. I have designed my program such that the result will consist of 10 most similar pictures. I have used python as my prime language, and utilized open cv for necessary image analysis. In Spring 2018 we completed the algorithm that collects the color information from the image and compares it with other images. For next semester, we plan to add an edge feature as well.

Project Dissemination:

This research was accepted and presented in the National Conference for Undergraduate Research (NCUR 18). It was also presented at the Celebration of Student Scholarship, Morehead State University,Morehead, KY, April, 2018.

Awards and/or Honors:

Certificate of Merit from MSU Celebration of Students Scholarship.

Post-Graduation Plans (Seniors only):

N/A

VanHoose, Justin

Major:

Design and Manufacturing Engineering Technology

Faculty Mentor:

Jorge Ortega-Moody

Research/Project Title:

Design and Development of a Self-Regulating Tower Garden and Design and Development of an Autonomous Tractor System

Project Abstract/Summary:

This research project had essentially the same goal, to test and expand on the research assistant's abilities with CAD software as well as expose them to new aspects in engineering such as programming and electrical control. While the research was based around design aspects there were times that the researcher was pushed to utilize these new tools to solve problems that were encountered within the projects. The tower garden was intended to utilize aeroponics as well as concentrated nutrients in order to shorten the growing time in several different plants. The Tractor system was intended to offer a hands free option to operators in order to reduce on fatigue and increase safety when operating the vehicle for a long period of time.

Project Dissemination:

Oral Presentations:

VanHoose, J. (2018, April). Design and Development of an Autonomous Tractor System. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, Kentucky, April, 2018.

VanHoose, J., Holbrook, K., Keene, L., & Steele, R. (2018, March). Chinampa Gardens. Oral presentation, Idea State U Regional Competition, Morehead, KY.

VanHoose, J., Holbrook, K., Keene, L., & Steele, R. (2018, April). Chinampa Gardens. Oral presentation, Idea State U State Competition, Lexington, KY.

Awards and/or Honors:

Idea State U Regional Competiton: The research team along side the business team (College of Business Students) received a top five placement earning the team the right to compete at the state competition one month later.

Morehead's Celebration of Student Scholarships: The research earned the Exceptional Merit Award for the department of Engineering Technology.

Post-Graduation Plans (Seniors only):

N/A

CAUDILL COLLEGE OF ARTS, HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF ART AND DESIGN

Baldridge, Garrett

Major:
Studio Art
Faculty Mentor:
Adam Yungbluth
Research/Project Title:
Morehead State Ceramics Studio Glaze Tests 2017/2018
Project Abstract/Summary:
The research project centers around the revamping of our ceramic studio's cone 10 reduction glazes. During the project, I isolated problematic glaze recipes that were unsuccessful, and replaced them with more interesting and functional glazes. The final selection consisted of twelve glazes of various color and surface, all being food, microwave, and dishwasher safe. All Glazes were fired on test tiles for display to the students along with a combination of each glaze layered one over top of another. I found that the students were very excited with this project from the beginning, and would check back often to see my results. In the end they were eager to try each of their favorite combinations after they saw the finished tiles, and were interested in why some had defects while others did not.
Project Dissemination:
Exhibition, 2018 Annual MSU Celebration of Student Scholarship.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Davidson, James M.

Major:
Art
Faculty Mentor:
Elizabeth Mesa-Gaido
Research/Project Title:
Down the Rabbit Hole: A Graphic Novel
(Originally titled: Very Faun of You: A Journey into the Woods of Unusual Characters and Far Off Lands)
Project Abstract/Summary:
Original Abstract:
The project will be based on Davidson's original characters, utilizing them to create and develop in-depth concept designs, character analysis, and storyboarding. He will explore and produce high-level concept art and character designs, resulting in unique, interesting and exciting characters and storylines, with the anticipated outcome of producing a graphic novel or a series of comics, and a website. His long-term goal is to animate the figures, possibly creating a movie. Collaborating with faculty and peers for feedback will also be an important part of Davidson's process.
Abstract for the 2018 Oral Presentation:
Alice in Wonderland by Lewis Carrol is a childhood classic with many different forms of adaptations. The project provides a new contemporary take on this classic, showcasing the protagonists with antagonistic, darker undertones. With this graphic novel, many current concepts are explored relating to social, emotional, and mental health issues. An intimate and raw view of the beloved childhood characters is presented. Character depictions are more mature, crude, and unnerving. Narration is created through hand-drawn pages and text. Multiple manuscript drafts are edited to create the final panel scripts which are merged with the drawn images; the final stage requires scanning the images to create digital files, which are color corrected and edited in Photoshop. Thorough and meticulous research in collaboration with many of the departments on campus, in combination with personal studies of other artist's graphic novels, are used to create an accurate and in-depth graphic novel incorporating concept ideas, character analysis, and storyboarding. This research project was supported by an Undergraduate Research Fellowship.

Project Dissemination:

Davidson, James (2018, April). Down the Rabbit Hole: A Graphic Novel. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Davidson, James (2018, May). Down the Rabbit Hole: Preview, Page 1. Publication, Inscape: Literary & Visual Arts Journal, Morehead State University, 2018, p.50, color image.

Inscape: Literary & Visual Arts Journal, ScholarWorks Digital Archive: https://scholarworks.moreheadstate.edu/inscape_magazine_archive/80/

Davidson, James (2017, November). Down the Rabbit Hole: Graphic Novel Preview. Exhibition, Juried Student Art Exhibit, Gateway Regional Art Center, Mt. Sterling, KY, November, 2017.

Awards and/or Honors:

Davidson utilized a mini preview print of the completed graphic novel pages as part of his BFA in Art portfolio application; he was accepted into MSU's competitive BFA in Art program in October 2017.

Post-Graduation Plans (Seniors only):

N/A

Duff, Nicole

Major:

Studio Art

Faculty Mentor:

Jennifer Reis

Research/Project Title:

The Art of Exhibitions

Project Abstract/Summary:

The Undergraduate Fellowship in The Art of Exhibitions focused on the management, design, installation and promotion of arts programming specific to large-scale university exhibitions and events within a university context. Nicole Duff was engaged in the hands-on creation and management of art events during the 2017-2018 academic year including six large-scale faculty, student, and professional artist exhibitions, the annual Halloween Costume Contest and Rocky Horror Picture Show, and the eighth annual Craft Bizarre: MSU Student Art & Craft Sale. Duties included exhibition design, installation, creation of wall-mounted exhibition text, event management and hospitality, art handling, receiving, and public relations. Her work included hosting evening and weekend programming as well. This fellowship is designed to prepare a student to begin a business in arts entrepreneurship and/or a career in arts administration. Supported by the CCAHSS and Department of A&D.

Project Dissemination:

Golding-Yang Art Gallery and Celebration of Student Scholarship

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Flanagan, Maggie

Major:

Art/CVM

Faculty Mentor:

Robyn Moore

Research/Project Title:

Photography Practicum: Learning the Basics of Managing a Fine Art Photography Studio

Project Abstract/Summary:

The photography practicum provides Art and Design student researchers with the practical experience of managing a fine art photography studio. Students learn how to operate, manage, and maintain industry standard fine art archival inkjet printers as well as a fifteen station traditional black and white darkroom. This project provides essential expertise and knowledge that students, as lab monitors, both share with other students and incorporate into their own fine art practice and professional activities. Student researchers learn how to mix, store, and dispose of photographic chemistry, provide daily assistance to undergraduate and graduate photography students, and generate ideas for improvements to the lab. Students also contribute to the ongoing revision of the Photography Lab Manual, which specifies best practices and operating procedures for future photography lab monitors. The practical knowledge gained from this experience is highly valuable to colleges, universities, community colleges, artist co-ops, and professional photography labs that seek to employ individuals to manage and teach both digital and analog photography practices. This research was funded with an Undergraduate Research Fellowship.

Project Dissemination:

Student, Maggie Flanagan and Professor, Robyn Moore (2018, April). Photography Practicum: Learning the Basics of Managing a Fine Art Photography Studio. Poster, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Flanagan, Maggie

Major:

Art/CVM

Faculty Mentor:

Joy Gritton

Research/Project Title:

Engaging the Next Generation with Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming

Project Abstract/Summary:

This project, conducted in association with the Appalachian Studies Association, the primary national professional organization for the Appalachian region, addressed the challenges of expanding participation in the annual inerdisciplinary ASA conference, drawing on the perspectives of Undergraduate Research Fellows who worked closely with the 2018 Program Committee. Particular emphasis was placed on drawing youth into conference participation through the use of technology (including social media), and fostering diverse programming that has relevance for younger participants and those not comfortable with traditional academic formats. The project was designed to help ASA leadership and others understand the benefits of meaningful involvement of students in conference planning.

Project Dissemination:

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele, and Professor Joy L. Gritton (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Explanding Outreach through Technology and Diversity of Programming, poster, Celebration of Student Scholarship, Morehead, KY, April, 2018.

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Explanding Outreach through Technology and Diversity of Programming. Roundtable, Appalachian Studies Association 41st Conference, Cincinnati, OH, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Greenwell, Kansas

Major:

Nursing

Faculty Mentor:

Joy Gritton

Research/Project Title:

Health Education at the Haldeman Community Center after School Program

Project Abstract/Summary:

Due to a steady increase of chronic illnesses nationwide, there was a need identified for education on healthy lifestyle choices. Taking place at an after-school program in a rural area, children got the opportunity to learn about gardening, nutrition, and physical activity. The program offered a hands-on experience for the kids to raise their own vegetables, cook recipes using fresh foods that they grew, and learn the importance of getting a variety of nutrients. Physical activity was an important part of the program, as well, so as to stress staying active. Age groups ranged from 6-12 and appropriate learning activities were provided for each age group. The goal of the health education program was that children could make healthy lifestyle choices in the future.

Project Dissemination:

Kansas Greenwell and Professor Joy Gritton. (2018, April). Education and Nutrition and Physical Education. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Johnson, Emily

Major:

History

Faculty Mentor:

Joy Gritton

Research/Project Title:

Engaging the Next Generation with Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming

Project Abstract/Summary:

This project, conducted in association with the Appalachian Studies Association, the primary national professional organization for the Appalachian region, addressed the challenges of expanding participation in the annual interdisciplinary ASA conference, drawing on the perspectives of Undergraduate Research Fellows who worked closely with the 2018 Program Committee. Particular emphasis was placed on drawing youth into conference participation through the use of technology (including social media), and fostering diverse programming that has relevance for younger participants and those not comfortable with traditional academic formats. The project was designed to help ASA leadership and others understand the benefits of meaningful involvement of students in conference planning.

Project Dissemination:

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele, and Professor Joy L. Gritton (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming. Roundtable*,* Appalachian Studies Association 41st Conference, Cincinnati, OH, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Lunsford, Sarah

Major:

Art Education

Faculty Mentor:

Joy Gritton

Research/Project Title:

Haldeman after School Art Program

Project Abstract/Summary:

This project provided coordinated art activities for children participating in the Haldeman After School Program. Art activities included a wide range of art lessons that engaged and challenged each student's creativity. The program's central purpose was to offer a safe, child-centered, nurturing after school enrichment program for elementary students at the Haldeman Community Center. Participating children enjoyed visual arts instruction in 2-D and 3-D formats. For many of the students these lessons were not only an introduction to different art forms, but also an outlet mentally and emotionally for stressors in their daily lives. It is hoped that the Haldeman children will have gained a greater appreciation of the role that the arts and creativity play in their present and future lives.

Project Dissemination:

Lunsford, Sarah J. and Dr. Joy Gritton. (2018, April). Haldeman After School Program: Engaging and Challenging Student Creativity. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Teaching Art grades 9-12 and attending a low-residency Art Therapy graduate program.

Muse, Savannah

Major:

Psychology

Faculty Mentor:

Joy Gritton

Research/Project Title:

Engaging the Next Generation with Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming

Project Abstract/Summary:

This project, conducted in association with the Appalachian Studies Association, the primary national professional organization for the Appalachian region, addressed the challenges of expanding participation in the annual interdisciplinary ASA conference, drawing on the perspectives of Undergraduate Research Fellows who worked closely with the 2018 Program Committee. Particular emphasis was placed on drawing youth into conference participation through the use of technology (including social media), and fostering diverse programming that has relevance for younger participants and those not comfortable with traditional academic formats. The project was designed to help ASA leadership and others understand the benefits of meaningful involvement of students in conference planning.

Project Dissemination:

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele, and Professor Joy L. Gritton (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming, Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming. Roundtable, Appalachian Studies Association 41st Conference, Cincinnati, OH, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Pace, Bethany

Major:

Studio Art

Faculty Mentor:

Jennifer Reis

Research/Project Title:

Art of Cultural Programming

Project Abstract/Summary:

The Undergraduate Fellowship in The Art of Cultural Programming focused on the logistical planning, management and marketing of arts programming specific to large art and design exhibitions and events within a university context. Embedded within the arts programming hosted by the Claypool-Young Art Gallery, UR Bethany Pace focused on the coordination and management of art events during the 2017-2018 academic year including six large-scale faculty, student, and professional artist exhibitions, the annual Halloween Costume Contest and Rocky Horror Picture Show, and the eighth annual Craft Bizarre: MSU Student Art & Craft Sale. Duties included event management and hospitality, art handling, receiving, and public relations. Her work included hosting evening and weekend programming as well. Ms. Pace also spearheaded the January 2018 Restore Kentucky Arts Funding event at CoffeeTree Books through the Emerging Arts Leaders of Eastern Kentucky. This fellowship is designed to prepare a student to begin a business in arts entrepreneurship and/or a career in arts administration. Supported by the CCAHSS and Department of A&D.

Project Dissemination:

Golding-Yang Art Gallery and Celebration of Student Scholarship.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Pruitt, Dustyn (Alexander)

Major:

Government

Faculty Mentor:

Jennifer Reis

Research/Project Title:

The Art of Culture Advocacy

Project Abstract/Summary:

The Undergraduate Fellowship in The Art of Cultural Advocacy focused on the management of cultural programming within a university context as well as arts advocacy on campus and in the region. Mr. Pruitt gained hands-on skills in the coordination of art events during the 2017-2018 academic year including six large-scale faculty, student, and professional artist exhibitions, the annual Halloween Costume Contest and Rocky Horror Picture Show, and the eighth annual Craft Bizarre: MSU Student Art & Craft Sale. Duties included event management and hospitality, art handling, receiving, and public relations. Additionally, Mr. Pruitt was a student manager and speaker at the January 2018 Restore Kentucky Arts Funding event at CoffeeTree Books through the Emerging Arts Leaders of Eastern Kentucky. This fellowship is designed to prepare a student to begin a business in arts entrepreneurship and/or a career in arts administration. Supported by the CCAHSS and Department of A&D.

Project Dissemination:

Exhibitions in the Golding-Yang Art Gallery, presentation at Celebration of Student Scholarship, and the Restore KY Arts Funding event.

Awards and/or Honors:

Merit award for presentation at Celebration of Student Scholarship.

Post-Graduation Plans (Seniors only):

Attending graduate school.

Rhoden, Kaitlyn

Major:

University Studies

Faculty Mentor:

Joy Gritton

Research/Project Title:

Using Art to Teach Recycling and Pride in the Region at the Haldeman Community Center after School Program

Project Abstract/Summary:

It is very important that children of today are exposed to the arts, since they may not have extensive exposure at their schools. While art is an important outlet for both stress and creativity, it can also be used to teach about issues communities are facing (such as pollution and liter), and to foster awareness of a community's history and pride in heritage. For this project, children attending the Haldeman Community Center After School Program, participated in activities using a variety of media (collage, paper bead making, and quilting), using recycled materials in order to make something new from "trash" and to help the environment. The children also learned about their community and the history of the area, as well as recycling, in hopes they will gain a new-found respect for their home, both on a local and planetary scale.

Project Dissemination:

Kaitlyn Rhoden and Professor Joy L. Gritton. (2018, April). Using Art to Teach Recycling and Pride in the Region. Oral presentaiton, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Shaffer, Justin S.

Major:

Animal Science

Faculty Mentor:

Joy Gritton

Research/Project Title:

Learning About Living Things at the Haldeman after School Program

Project Abstract/Summary:

This project was to coordinate an animal science program for children in kindergarten through sixth grade at the Haldeman After School Program in Rowan County. Participants were led in lessons and activities about agriculturally relevant animals, including horses, swine, cattle, donkeys, poultry, goats, and sheep. The program culminated in a field trip to the MSU farm.

Project Dissemination:

Justin Shaffer and Professor Joy L. Gritton (2018). Teaching Animal Sciences at the Haldeman After School Program. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Shaffer plans on going into a career as a wildlife biologist.

Stachler, Madison

Major:

Agricultural Education

Faculty Mentor:

Joy Gritton

Research/Project Title:

Learning About Living Things at the Haldeman Community Center After School Program

Project Abstract/Summary:

This project was to coordinate an agricultural program, including both plant science (assisting with raised bed gardening) and animal science, for children participating in the Haldeman Community Center After School Program in Rowan County. Emphasis was placed on animal behavior (especially between animals and humans); appropriate care for animals and gardens; and the importance of maintaining habitat and biodiversity. The project also promoted themes fostered at the Haldeman Center, such as kindness, personal responsibility, working together cooperatively, and respect for others.

The Haldeman After School Program offers a safe, child-centered, nurturing after school enrichment program for elementary students Monday through Thursday during the months of March, April, September, and October at the Haldeman Community Center. Participating children enjoy physical activities, a nutritious snack, a planned learning activity, and help with their homework and tutoring.

The Haldeman Community Center's mission is to provide a place for those in the community to meet for fellowship, to provide children with a safe haven away from drugs, to foster the dramatic and musical arts, by providing a place for their practice and performance and to help sustain and enhance the year-round economic, educational, recreational, and social well being of the community's residents.

Project Dissemination:

Madison N. Stachler and Professor Dr. Joy L. Gritton. (2018, April). Agriculture All Around Us. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Steele, Lucy

Major:

Marketing

Faculty Mentor:

Joy Gritton

Research/Project Title:

Engaging the Next Generation with Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming

Project Abstract/Summary:

This project, conducted in association with the Appalachian Studies Association, the primary national professional organization for the Appalachian region, addressed the challenges of expanding participation in the annual interdisciplinary ASA conference, drawing on the perspectives of Undergraduate Research Fellows who worked closely with the 2018 Program Committee. Particular emphasis was placed on drawing youth into conference participation through the use of technology (including social media), and fostering diverse programming that has relevance for younger participants and those not comfortable with traditional academic formats. The project was desgined to help ASA leadership and ohters understand the benefits of meaningful involvement of students in conference planning.

Project Dissemination:

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele, and Professor Joy L. Gritton (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Maggie Flannagan, Emily Johnson, Savanna Muse, Lucy Steele (2018, April). Engaging the Next Generation in Appalachian Studies: Building Community and Expanding Outreach through Technology and Diversity of Programming. Roundtable, Appalachian Studies Association 41st Conference, Cincinnati, OH, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF COMMUNICATION, MEDIA AND LANGUAGES

Day, Hannah

Major:

Education

Faculty Mentor:

Donnell Murray

Research/Project Title:

Development of an Online Journaling Platform for Social Integration for International Students

Project Abstract/Summary:

Social integration in this international peer mentoring program can be as important as academic integration. In the selection of a social integration tool, Penzu online journaling was selected. Penzu focuses on privacy and is available in a free phone application for ease of use any time during the day or night. A weekly Penzu journal entry consisting of graphics and text, between the peer mentor and the peer mentee, is shared within the program. In this qualitative study, a focus group and interviews studied the benefits of social integration when using an online journal.

Results – The inclusion of using this platform for social integration led to academic integration with ESL International students in the ESL classroom in the Spring 2018 semester.

Project Dissemination:

Oral Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Day, H., Finley, J. & Murray, D. (2018, May). Penzu Online Journaling: Benefits of the Social Integration for the International Peer Mentoring Program at Morehead State University. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Merit Award, Celebration of Student Scholarship, May 2018.

Post-Graduation Plans (Seniors only):

N/A

Donahue, Brooke

Major:

Sociology

Faculty Mentor:

Ann Andaloro

Research/Project Title:

Gender Studies Assistant/Hear Me Roar Producer

Project Abstract/Summary:

This project focused on documenting stories of gender and American Life. Segments focused on reaffirming the Goddess through the arts. In addition, the work included interviews with international students about their thoughts on gender and the American dream. This series of videotaped interviews were aired on MSU TV Hear me Roar. The work received a first place media award for Judy Rodgers, Art Media and Writing contest from the Gender Studies Program at MSU.

Project Dissemination:

Hear me Roar/MSU-TV online content.

Celebration of Student Scholarship.

Judy Rodgers Art, Media and Writing Contest.

Gender Studies end of the year celebration.

Awards and/or Honors:

Judy Rodgers Art, Media and Writing Contest First Place for Media.

Post-Graduation Plans (Seniors only):

N/A

Finley, Joseph Brock

Major:

Health Care Administration

Faculty Mentor:

Donell Murray

Research/Project Title:

Development of an Online Journaling Platform for Social Integration for International Students

Project Abstract/Summary:

Social integration in this international peer mentoring program can be as important as academic integration. In the selection of a social integration tool, Penzu online journaling was selected. Penzu focuses on privacy and is available in a free phone application for ease of use any time during the day or night. A weekly Penzu journal entry consisting of graphics and text, between the peer mentor and the peer mentee, is shared within the program. In this qualitative study, a focus group and interviews studied the benefits of social integration when using an online journal.

Results – The inclusion of using this platform for social integration led to academic integration with ESL International students in the ESL classroom in the Spring 2018 semester.

Project Dissemination:

Finley, J.B., Day, H. and Murray, D. (2018, May). Penzu Online Journaling: Benefits of the Social integration for the International peer Mentoring Program at Morehead State University. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Merit Award, Celebration of Student Scholarship, April, 2018.

Post-Graduation Plans (Seniors only):

Brock plans on a career in human resources in the near future.

Holmes, Alexandra

Major:

Biomedical Sciences

Faculty Mentor:

Philip Krummrich

Research/Project Title:

Under Milk Wood, an Experiment in Student Leadership

Project Abstract/Summary:

In today's world of rising expectations for students, competitive programs, and emphasis on scientific studies, it is easy to forget about the arts, or regarad them as inferior to or less worthwhile than pursuits in other fields. For this presentation, I have decided to cast, direct, and act in "Under Milk Wood," a play for voices by Welsh poet Dylan Thomas. With this research, I plan to demonstrate how the arts may still be of value to a student striving towards a fulfilling career. In many scientific career paths, students predominantly attend lectures and absorb information, and rarely have the opportunity to generate their own, unique material. To take nearly the full responsibility of a creative project on one's own shoulders for the first time – to organize and create an event with free rein and no previous infrastructure to rely on – is a valuable opportunity for any student to participate in. With this project, I worked solely with my peers and with upperclassmen, acting as their superior in the role of the director, and also as their equal in the role of an actor. This presented several challenges, including the issues of mutual respect, organization, and compromise when working with a group of people. Overcoming these challenges and presenting a polished piece of performance art to the public.

Project Dissemination:

The play was performed in Duncan Recital Hall; the student made a poster presentation at the Celebration of Student Scholarship.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Milantoni, Silvia

Major:

Philosophy/Business

Faculty Mentor:

Ann Andaloro

Research/Project Title:

Research and Creative Production Assistant for the Gender Studies Program

Project Abstract/Summary:

Silvia was an event planner for the Wilma Grote Symposium for the advancement of Women. She coordinated the Judy Rodgers Art, Media and Writing Contest. She created content for the Gender Studies Website. She was an event planner for the International Women's Day Celebration. She created a video for the Kentucky Communication conference about International students.

Project Dissemination:

MSU Gender Studies Website.

Wilma Grote Symposium for Women.

Awards and/or Honors:

First Place Judy Rodgers Art, Media and Writing Competition.

Post-Graduation Plans (Seniors only):

N/A

Potts, Alexa

Major:

History/Legal Studies

Faculty Mentor:

Philip Krummrich

Research/Project Title:

Kentucky and Travel Writing

Project Abstract/Summary:

In the years since the first settlers of European descent came to Kentucky, the state has been visited by many outsiders, some of whom have written intriguing reactions to their observations and experiences. In this study, we will continue to survey the entire history of travel writing about Kentucky, with special emphasis on the periods when, for various reasons, more visitors wrote about the people and places they encountered in the Commonwealth.

Project Dissemination:

Potts, Alexa K. and Krummrich, Philip (2018, April). Past to Present Olive Dame Campbell's Appalachian Travels. Oral presentation, Phi Alpha Theta Regional History Conference, Morehead, KY, April, 2018.

Potts, Alexa K. and Krummrich, Philip (2018, April). Past to Present: Olive Dame Campbell's Appalachian Travels. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Potts, Karly

Major:

Business

Faculty Mentor:

Philip Krummrich

Research/Project Title:

Internationalizing Honors

Project Abstract/Summary:

I begin with the assumption that providing different options for International experiences strengthens Honors programs, and several components of such internationalization will be compared throughout this research. Recognizing that international experiences represent heavy investments of time, energy and money for individual students and for honors programs, I focus on a small number of programs that have made substantial commitments to international experiences for their students. I will explore various approaches to internationalizing Honors with the goal of presenting findings that may be useful to those involved in designing and implementing international components of Honors programs.

Project Dissemination:

The student made an oral presentation at the Kentucky Honors Roundtable, and another at the Southern Regional Honors Conference in Washington D.C.; she then presented a poster at the Celebration of Student Scholarship. She submitted an article to the Journal of the National Collegiate Honors Council, but unfortunately it was not accepted.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Syck, Taryn

Major:

Psychology

Faculty Mentor:

Alison Heron Hruby

Research/Project Title:

Young Writers Eastern Kentucky

Project Abstract/Summary:

The objective of this qualitative interview study is to generate knowledge teachers can use to create classroom environments that foster the craft of writing beyond the learning of rules and formulas. Since the advent of standardized testing as the primary tool for measuring school success in kindergarten through high school graduation, writing instruction in high schools has increasingly become about mastering formulas and rules instead of about producing a variety of genres for an array of audiences. Because writers do much more than depend on formulas when creating written text, high school English teachers would benefit from understanding more about young people's behaviors and preferences as writers. To meet the objective of the study, I will interview 30 high school students in eastern Kentucky about their writing habits and predilections.

Project Dissemination:

Data collection and analysis is ongoing, as this project involves university researchers in 4 different states, with a total of six researchers collecting interview data. So far the research team has submitted posts based on preliminary results to the peer-reviewed blog *Writers Who Care* (https://writerswhocare.wordpress.com/) and will present these results at the 2018 Annual Convention of the National Council of Teachers of English (NCTE) in Houston, Texas. The first journal manuscript based on the study is in progress and will focus on adolescents' writing identies. Ms. Syck has been invited by her MSU faculty mentor (Dr. Alison Hruby) to attend the NCTE convention in November 2018, to co-present with the lead researchers.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Wallace, Madison

Major:

Strategic Communication

Faculty Mentor:

Morgan Getchell

Research/Project Title:

Exploring the Impact of Exemplification Theory on the Reception of Messages Regarding Animal Biosecurity

Project Abstract/Summary:

This study seeks to determine the impact of exemplars in news stories on individuals' risk decision-making process through the use of a computer simulation. The simulation examines the role of information, such as levels of biosecurity threats and biosecurity practices, in the participant's willingness to invest in biosecurity measures to stop the spread of porcine epidemic diarrhea virus (PEDv). Preliminary analysis of the study shows no statistically significant findings. This research was supported by a MSU Undergraduate Research Fellowship and by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-69004-23273.

Project Dissemination:

Wallace, Madison L. and Getchell, Morgan (2018, April). Exploring the Impact of Exemplification Theory on the Reception of Messages Regarding Animal Biosecurity. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF HISTORY, PHILOSOPHY, POLITICS, INTERNATIONAL AND LEGAL STUDIES

Adkins, Henry C.

Major:
History
Faculty Mentor:
Thomas Kiffmeyer
Research/Project Title:
Appalachia is America, America is Appalachia: The Struggle for Ideology and Identity in Trump Country
Project Abstract/Summary:
This research project investigated the image of Appalachia and how that depiction factored into the nation's political and economic history – including the latest presidential election. Beginning in the late nineteenth century, journalists, reformers, and many Americans generally who were disturbed by the massive influx of "non-whites" (by their definition) in the United States created an image of Appalachian "otherness." This image, interestingly, celebrated Appalachians' genetic "purity" while it concomitantly condemned their "backwardness." Both renditions, the positive and the negative, of this image, however, have provided its creators justifications for intervening into the lives of mountaineers. Whether feudists, hillbillies, or the benighted poor, the inhabitants of this "strange land" have been the objects upon which "modern" America has acted. From the settlement schools of the progressive era until the opiod-addicted "culture in crisis" of current commentator, J.D. Vance, Appalachia clearly serves as the image of which outside modern America is not. It is intriguing that in the elections of 2016, Appalachians themselves reacted to this constructed image and overwhelmingly supported the candidate (or candidates since Appalachians also turned to "Political Outsider" Bernie Sanders in the democratic primaries) that also rejected mainstream America.
Project Dissemination:
Adkins presented his work at:
Shawnee State University's Imaging Appalachia in the Digital Age conference on April 13, 2018.
Celebration of Student Scholarship, MSU April 25, 2018.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
Mr. Adkins plans on pursuing a doctorate in American history, with a special focus on labor and working class history, at West Virginia University.

Bryer, Brandon

Major:
Government
Faculty Mentor:
William Green
Research/Project Title:
Off with their Headscarves: The Social, Political, and Legal Ramifications of French Laicite
Project Abstract/Summary:
In Western democratic nations, the fundamental right to freedom of religion is subject to legal limitations. In France, the principle of laicite, or secularism, which traces its origins to Revolution of 1789, excludes religion from the public domain and restricts it to the private sphere. In response to the practice of Muslim women of wearing religious garments, the French National Assembly enacted a law in 2004 prohibiting girls from wearing headscarves in public schools and six years later prohibiting women from wearing the burqua in public. These laws were upheld by the French Constitutional Council and then appealed to the European Court of Human Rights. The Court upheld the laws against the claim that they intruded upon the freedom of religion protected by Article 9 of the European Convention of Human Rights, because of France's interest in public health and safety and the maintenance of a religious neutral society.

Project Dissemination:
Presentation at the 2018 Kentucky Political Science Association Annual Meeting, Murray, KY.
Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.
Awards and/or Honors:
Merit Award, Caudill College of Arts, Humanities and Social Sciences, 2018 Celebration of Student Scholarship.
Post-Graduation Plans (Seniors only):
N/A

Buschman, Sarah M.

Major:
International Studies/Spanish
Faculty Mentor:
James Masterson
Research/Project Title:
Immigration Flows and the Rise of Ethno-Nationalism in Europe
Project Abstract/Summary:
Using panel data from the 2017 Eurobarometer survey, this research aims to understand the impact that the recent surge of immigration flows into European countries has had on a rise in nationalist and anti-immigration attitudes. The research found that there was not statistical difference in the attitudes of non-European immigrants among nationalists in low immigration countries and high immigrations countries. However, attitudes towards non-European immigrants improved among non-nationalists in high immigrant countries compared to those in low immigrant countries. As a result, we found that increasing levels of immigration levels tend to improve attitudes of non-European immigrants among those that exhibit low nationalists tendencies.
Project Dissemination:
Exhibition: Celebration of Student Scholarship, Morehead State University, April, 2018.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
Plan to apply within the next two years to a graduate program in International Relations at the Institut Barcelona de Estudis Internacionals (IBEI), or at Humboldt University of Berlin.

Cooper, Matthew

Major:
Government
Faculty Mentor:
James Masterson
Research/Project Title:
School Funding and Educational Achievement in Rural Kentucky: A Multi-Level Analysis
Project Abstract/Summary:
A multi-level analysis including 120 districts in Kentucky investigating the effect of three spending measures (overall, teacher and technology) upon achievement (ACT and KPREP) while controlling for various school and county attributes. The study found that increases in spending per student are associated with increases in average KPREP and ACT scores at the school level. Increases in attendance rates, and enrollment, as well as increases in student teacher ratio, were also found to be contributors to improved standardized test scores. Last, reductions in the percentage of students on free and reduced lunch contribute towards improvements in the test scores.
Project Dissemination:
Presented at the Celebration of Student Scholarship.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
As a non-traditional student who is beholden to the State of Kentucky via the Trade Adjustment Assistance Program, I am considering a couple of options. First, I am considering the immediate pursuit of a career in education administration/support with either the Kentucky Department of Education, Kentucky School Board Association, or an individual school district. Second, I am considering seeking an MPA within the Morehead State University Graduate School (contingent upon acceptance and suitability).

Dean, Jonathan

Major:

History

Faculty Mentor:

Alana Scott

Research/Project Title:

The Sometimes-Queens of Wessex and Women in Anglo-Saxon Culture

Project Abstract/Summary:

The medieval world is traditionally treated as a difficult time for women, who lacked the rights and powers granted to men. While this is partially true, women found other ways to exercise influence and power, often through the education of their children or the Church. This holds true for the royal consorts of Wessex, one of the Anglo-Saxon kingdoms in the early Middle Ages. These women were unique among Anglo-Saxon consorts because, very intentionally, they were not given the title “queen.” This presentation will explore the history of the West Saxon royal consorts and how they fit into Wessex, taking into consideration the significance of women in the Church, their role in education, and their political – and sometimes military – influence, all of which come through in the lives of such women as Seaxburh, Osburh, Eadburh, Judith of Flanders, Ealhswith, Elfthryth, and Emma of Normandy. These lives will also be examined to gelan some insight regarding the status and condition of women in the Anglo-Saxon world.

Project Dissemination:

Jonathan presented his conference-length paper at the Celebration of Student Scholarship on April 25, 2018.

Awards and/or Honors:

He presented his UGF project from 2016-2017 at the Regional Phi Alpha Theta Conference in March, 2018, and won 2nd place in the undergraduate research paper category.

Post-Graduation Plans (Seniors only):

In the Fall 2018 Jonathan will be attending Asbury Seminary to work on an MA in Religious Studies and work on his Latin for further graduate study.

Heineman, Madeline

Major:

History

Faculty Mentor:

Alana Scott

Research/Project Title:

Is Paris Worth a Mass: Modern Historians Assess the French Religious Wars

Project Abstract/Summary:

Madeline will complete a research proposal, annotated bibliography, and conference-length research paper examining how historians in the 20th and 21st century evaluate the impact of the French relisious wars. She is pondering applying for graduate school in the future and this project will enable her to experience a typical history graduate school research assignment as well as provide her with yet another paper for her writing portfolio.

Project Dissemination:

Although she is currently working abroad, Maddy has pondered attending graduate school in the future and plans to submit her paper to the *Kentucky Journal of Undergraduate Scholarship* for consideration for publication.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Maddy graduated in December 2017 and moved to Seoul, South Korea in February,2018. She also completed an ESL certificate and she has a job working with businesswomen on their conversational English.

Hezseltine, Matthew

Major:

Engineering Technology

Faculty Mentor:

Kelly Collinsworth

Research/Project Title:

Does a Legal Studies Degree Provide Long-Term Benefits to our Students Attending and Graduating from Law School?

Project Abstract/Summary:

MSU is one of the few four-year Legal Studies programs approved by the American Bar Association for paralegal education. However, the majority of students at this time desire to attend law school rather than working as a paralegal. This project looks at current data provided by the Law School Admissions Council on student achievement in law school in order to create a survey of graduates from the program in the last ten years. The survey information will be used to quantify benefits from the program for future attorneys, as well as possible changes in programmatic offerings.

Project Dissemination:

Matthew Hezseltine, Professor Kelly Collinsworth (2018, April). Does a Legal Studies Degree Provide Long-Term Benefits to our Students Attending and Graduating from Law School? Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Jones, Michala

Major:

Legal Studies

Faculty Mentor:

Dianna Murphy

Research/Project Title:

Death and the Court: The Inaccessibility of Probate Proceedings for People in Eastern Kentucky

Project Abstract/Summary:

Pro se literally means on one's own behalf. Pro se cases make up a significant portion of cases before the courts in low income areas like Rowan County. In 2016, it took an average of eight months to close probate cases in Kentucky. The current probate forms used in Kentucky are not user friendly – especially for the layperson with no legal education and little formal education. This research aimed at rewriting the probate forms and establishing a pro se clinic to help people complete the paperwork when real estate is involved that has little to no fair market value. We achieved one of these goals – rewriting the forms – and made significant progress identifying the barriers to efficient court processing for pro se litigants. We plan to solicit additional input from the District Court Judge who approached us with this research project, as well as from the court clerks who often are the first legal staff to interact with the pro se petitioner. After that, we hope to design a pro se clinic to further assist in increasing accessibility to the courts for those who cannot afford an attorney.

Project Dissemination:

An oral presentation of this research project and study of statistics gathered from primary court documents and reports of the Administrative Office of the Courts. The presentation received a Certificate of Merit at MSU's Celebration of Student Scholarship in April, 2018.

Awards and/or Honors:

Certificate of Merit from Morehead State University at Celebration of Student Scholarship.

Post-Graduation Plans (Seniors only):

N/A

Lacey, Ravyn

Major:

Biology/Philosophy

Faculty Mentor:

Jack Weir

Research/Project Title:

Animals as Persons: To What Extent are Nonhuman Animals also Persons?

Project Abstract/Summary:

Morally and legally, human beings are "persons," but nonhuman animals are not. Why? To what extent is this critical distinction morally justified? It is acknowledged that humans and animals share the same roots, but where does the divide arise between human and nonhuman beings? What distinction proves sufficient to sever humanity from the rest? Despite many traits that are described as elevating humans above animals, these could be argued to be present at some level in various nonhuman animals. Thus, what makes us people in a way that animals are not if these traits are shared? This paper will delve into what we perceive to be a distinction between the human animal and the nonhuman, and will thus explore whether this distinction is necessary or morally justified.

Project Dissemination:
Poster presentation at the 2018 Celebration of Student Scholarship.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Little, Thomas

Major:
Government
Faculty Mentor:
William Green
Research/Project Title:
CETA: The Canadian European Union Trade Agreement
Project Abstract/Summary:
Twenty-five years after the implementation of the North American Free Trade Agreement (NAFTA), Canadians will have to decide whether to ratify a major trade deal, the Trans-Pacific Partnership, which will join together the twelve Pacific rim countries into one free trade zone. After seven years of secret negotiations, the document was finalized in October, 2015, and will be deliberated in and aratified by each of the twelve countries. If ratified the TPP will be Canada's largest multilateral free trade agreement to date. While many Canadians view the TPP as an essential extension of NAFTA, others doubt its ability to protect the environment, workers' rights, and human rights. This presentation will argue that it is in the best interest of Canadians for the Liberal party government to ratify the TPP on the basis of the measurable and unquantifiable economic success of NAFTA and the geopolitical advantages of the agreement. The research for this presentation was conducted in Ottawa, Canada, during my participation in the Summer 2018 Canadian Parliamentary Internship Program.
Project Dissemination:
Presentation at the 2018 Kentucky Political Science Association Annual Meeting, Murray, KY.
Presentation at the Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Prowant, Max

Major:
Government/Spanish
Faculty Mentor:
Jonathan Pidluzny
Research/Project Title:
Democratization in Tunisia and Turkey: A Comparative Case Study of Successful Liberalizing Reforms in the Middle East
Project Abstract/Summary:
There is no consolidated liberal democracies in the Muslim-majority states of the Middle East and North Africa. Where democratic institutions have emerged, the experiment has tended to be short-lived and illiberal. Likewise, where there is relatively liberal governance, there are few functioning democratic institutions. The one hopeful exception in the region is Tunisia. Since protestors ousted President Ben Ali in 2011, Tunisia has held two parliamentary elections and scores consistently high on human rights indexes. Why Tunisia alone has emerged as the region's most promising candidate for liberal democracy remains a contested issue among scholars of the region. In spite of the question's importance, recent scholarship has neglected a comparative analysis with Kemal Ataturk's Turkey, the closest case for comparison to explain Tunisia's success. Examining the democratic transitions in 20th century Turkey and 21st century Tunisia, this project will argue that Tunisia followed a similar path of reform as Turkey, placing particular emphasis on the role secularizing reforms of Ataturk and Ben Ali played in fostering societies with liberal attitudes. This project received generous support from MSU's Undergraduate Research Program.

Project Dissemination:

Prowant, Max. Democratization in Tunisia and Turkey: A Comparative Case Study of Successful Liberalizing Reforms in the Middle East. Poster Presentation at the Midwestern Political Science Association, Annual Meeting, April, 2018, Chicago, IL.

Prowant, Max. Democratization in Tunisia and Turkey: A Comparative Case Study of Successful Liberalizing Reforms in the Middle East. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Received Outstanding Government Student Award.

Post-Graduation Plans (Seniors only):

Plans to attend University of Texas – Austin, Doctoral Program in Political Science. Admitted with full funding. Also received funding admissions offers from Claremont Graduate University and Catholic University.

Quillen, Alexandra

Major:

Government/Math

Faculty Mentor:

Jonathan Pidluzny

Research/Project Title:

Machiavelli's Republican Turn: How the Discourses of Livy Foreshadows Key Features of the American Constitutional Tradition

Project Abstract/Summary:

Niccolò Machiavelli's critics have long accused him of denying that moral/ethical standards have any ontological basis, infamously denigrating him as a 'teacher of evil'. These accusers, struck by the extreme teachings contained in *The Prince,* tend to overlook the purpose of his other works, most important among them, the *Discourses on Livy.* This paper argues that Machiavelli's meditation on Rome is designed to construct an imaginary republic, one that remediates the flaws and duplicates the successes of history's most celebrated popular regimes: Rome, Sparta, and Venice. To the surprise of his detractors, Machiavelli's ideal republic resembles the American Republic in several important respects: both seek to limit the power of the executive through a careful separation of powers; and, much like the American founders, Machiavelli believed republics exist to protect, defend, and encourage the common good. Thus, this project intends to rehabilitate Machiavelli's reputation, both by revealing the reliance of later republican theorists on his ideas (including those the American framers turned to for inspiration), and by taking a new look at Machiavelli's political intention. After all, he claims he has taken a path "as yet untrodden" to benefit later generations. This project received generous support from MSU's Undergraduate Research Program.

Project Dissemination:

Ms. Quillen was scheduled to present at the Celebration of Student Scholarship, but was hospitalized the weekend prior and was not cleared to return to campus in time to present at the event. She plans to present this paper at the Ohio Association of Economists and Political Scientists annual meeting in Columbus, September 21-22, 2018.

Awards and/or Honors:

Admitted to Intercollegiate Studies Institute Honors Program.

Post-Graduation Plans (Seniors only):

N/A

Syck, Tyler

Major:

Government/History

Faculty Mentor:

Jonathan Pidluzny

Research/Project Title:

A Tale of Two Foundings: The Political Roots of America's Central Principles in the Creation of the First Colonies

Project Abstract/Summary:

The American Republic is among the greatest political and ideological achievements in the history of mankind. The principles laid out in its founding documents, such as the Declaration of Independence, have helped lay a basis for liberal democracies the world over, and have long been beacons of freedom to oppreseed people everywhere. However, these ideas and principles did not spring up all of the sudden one hot July in 1776. The political system, and the philosophy that undergirds it, were forming from the very first day that English settlers came to the new world. This project examines these principles as they originally emerged in several exceptional colonies – which placed different levels of emphasis on religious liberty, free market principles, and limits on the central government's authority – by examining the primary source documents that shaped their social and political evolution. This project received generous support from MSU's Undergraudate Research Program.

Project Dissemination:

Syck, Tyler. A Tale of Two Foundings: The Political Roots of America's Central Principles in the Creation of the First Colonies. Poster Presentation at the Midwestern Political Science Association, Annual Meeting, Chicago, IL, April, 2018.

Syck, Tyler. A Tale of Two Foundings: The Political Roots of America's Central Principles in the Creation of the First Colonies. Paper Presentaiton, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Recognized for leadership to MSU Board of Regents.
Received Outstanding Government Student Award.
Received Outstanding HPPIL Student Award.

Post-Graduation Plans (Seniors only):

Plans to attend the University of Virginia, Doctoral Program in Political Science. Admitted with full funding. Also received funded admissions offers from Michigan State University, Missouri State University, and others.

Von Mann, Elizabeth

Major:

Creative Writing

Faculty Mentor:

Kris DuRocher

Research/Project Title:

Images of Feminist Protest: The Negative Effects of the Media on the Women's Liberation Movement

Project Abstract/Summary:

The protests and activism for Women's Liberation of the 1960s and 70s became defining images for the modern feminist movement. An important factor in analyzing these events is examining the differences between what the protests were trying to demonstrate and how the media at the time chose to represent the movements. The media's representation of the 1960s and 1970s feminist movement was a key factor in how the country came to view feminism, and the effects of this propaganda can be seen in the post-feminism of the Women's Liberation Movement. This research seeks to analyze the negative effects media representation has on skewing the ideals and facts of modern feminism.

Project Dissemination:

Poster Presentation(s): 2018 Posters at the Capitol, Frankfort, Kentucky, February, 2018.
2018 Southern Regional Honors Conference, Washington D.C., April, 2018.
2018 Celebration of Student Scholarship, Morehead, Kentucky, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF MUSIC, THEATRE AND DANCE

Blevins, Aaron

Major:
Music Education

Faculty Mentor:
Brian Mason

Research/Project Title:
The Development of Multi-Tenor Drums in Modern Pageantry Arts

Project Abstract/Summary:
This research project studied the history of multi-tenor drums and their development within the setting of modern pageantry arts. Research focused on the modifications and adaptations taking place in terms of their construction, application, and presence throughout the differing idioms of pageantry arts. These elements were examined through studying photographs, video, and other records in order to determine the characteristics of multi-tenor drums during different periods of the past century changes seen over time were documented.

Project Dissemination:
Blevins, Aaron J. and Mason, Brian S. (2018, April). The Development of Multi-Tenor Drums in Modern Pageantry Arts. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Gibson, Cassie

Major:
Music Education

Faculty Mentor:
Lori Baruth

Research/Project Title:
Music as a Means of Healing: The Effects of Music Therapy Concepts with Regard to Elementary School Age Children and Infants in the Neonatal Intensive Care Unit

Project Abstract/Summary:
Music therapy has been shown to help people in many capacities, from education to the medical field. This study will focus on the effects of music therapy concerning children in elementary school as well as infants in the Neonatal Intensive Care Unit. First, it will present research and define what music therapy is and what it encompasses. It will then describe several forms of healing for children in elementary schools, such as coping skills for depression, anxiety, autism, as well as therapy for the specially-abled child. Additionally, this project will report on research findings of the benefits that music therapy has in the medical field, more specifically, the NICU. Cassie Gibson found an astounding benefit of these programs in both the NICU and elementary aged children. It helps infants grow rapidly and form properly. It can also be combined with speech therapy and help children overcome improper speech. This research showed that when using music as healing many good things will come about.

Project Dissemination:
Poster presentation at Posters-at-the-Capitol.
Oral presentation at Celebration of Student Scholarship.
Research paper will be edited and supplemented with interview information for possible publication in the Bluegrass Music News, Journal of Music Education, or other music therapy, medical, and music education journals.

Awards and/or Honors:
Student's Undergraduate Research Fellowship project was selected to be included in the Posters at the Capitol event in Frankfort, KY in February 2018.

Post-Graduation Plans (Seniors only):
N/A

Hall, T. Andrew

Major:
Theatre

Faculty Mentor:
Denise Watkins

Research/Project Title:
Director of Madrigal Feaste

Project Abstract/Summary:
Mr. Hall served as the director and stage manager of the Madrigal Feaste. He researched the Commedia Dell Arte history and performance style, directed the theatre portion of the Madrigal Feaste in the Commedia Dell Arte style, attended Madrigal committee meetings, assisted with costumes/decorations as necessary, organized all costume and prop needs for the theatre performance aspect, and assisted singers and music students with performance aspects in the Commedia style. Student frequently communicated with choir director, theatre advisor, foundation representative, and other members of the steering committee as needed.

Project Dissemination:
Madrigal Feaste was performed for 2 evenings in December.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Johnson, Miranda

Major:
Music Education

Faculty Mentor:
Michele Paynter Paise

Research/Project Title:
Music Majors with Tourette Syndrome: What Teachers Need to Know

Project Abstract/Summary:
The purpose of this study was to examine the lives of two college music majors with Tourette Syndrome. Over a period of six months, I collected data through emails, formal and informal interviews, and observations. I also reflected on each question I asked the participants and kept my answers in a journal. I then examined the data and searched for themes. I found that the participants discussed five important factors of having Tourette Syndrome that may be important for teachers to know. I discuss each of these factors and make suggestions for future research.

Project Dissemination:
Johnson, Miranda K. (2018, April). Music Majors with Tourette Syndrome: What Teachers Need to Know, poster, Celebration of Student Scholarship, Morehead, KY, April, 2018.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Kabzinski, Lydia

Major:
Theatre

Faculty Mentor:
Denise Watkins

Research/Project Title:
Cataloguing and Digitizing Costume History Slides

Project Abstract/Summary:
The student researched a costume history slide collection, cataloguing significant costume history terms, and additional keywords relative to other disciplines. For this year, the student thoroughly researched slides from Ancient Egypt, Greece, and Rome, and added costume history terminilogy that was missing.

Project Dissemination:

Student presented at Celebration of Student Scholarship. It is estimated that this project will take years to complete, at which time the project can be more widely distributed.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Keyser, Melissa

Major:

Traditional Music

Faculty Mentor:

Nathan Kiser

Research/Project Title:

The Carter Family: A Musical Family's Continuing Influence on Today's Appalachian Musicians

Project Abstract/Summary:

This research project will examine the influence of the Carter Family through a recording project and archival research. The project will also include a research paper exploring the ways that the Carter Family have affected popular culture. Throughout the history of the Carter Family, many diverse people have contributed to the development of their repertoire. Carter family songs transcend genre and continue still to shape popular music. Starting in 1928 with the help of Lesley Riddle, an African American musician, A.P. Carter collected songs that represented the many styles that existed in the Appalachian Mountains during that time period. In addition, they both composed new material and arranged some of the collected songs to become what is now identified as the Carter Family style. The presentation represents the many styles of the Carter Family through a recording project. It includes songs the Carter Family wrote, songs they collected, songs done in the many styles covered by influenced musicians, and songs that have been rearranged to better fit modern social settings. A few examples of the things the archival research will focus on are examining and extracting old recordings of the Carter Family and reading through some of their interviews and set lists. One of the many things that will be presented in the paper are interviews of the Carter family relatives that are still alive today and running "The Carter Family Fold". They will be able to give a perspective that may have never been heard of before.

Project Dissemination:

This research project was presened at the Appalachian Studies Association conference in Cincinnati, Ohio in April 2018. It will be submitted to be published in the Journal of Appalachian Studies this summer.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Osborn, Kaitlyn

Major:

Music

Faculty Mentor:

Roma Prindle

Research/Project Title:

The Psychology of Singing: The Effects of Emotions on the Voice

Project Abstract/Summary:

Research suggests that attachment, shame, trauma, and other emotional patterns need to be addressed in the aspiring vocalist because these factors can manifest in their voice. Stress and performance anxiety in the singer often cause muscle tension around the larynx. Many vocalists experience difficulties in controlling their stage fright and other negative emotions. Therefore, this study aims to benefit the vocal department at MSU by increasing awareness of the effects emotions can have on the voice. My study involved self-reports from MSU vocal students pertaining to how they handle positive and negative emotions before and during a performance. I also conducted behavioral observations of these students during performance, focusing on any mannerisms they exhibited in association with their reported emotion(s) at the time. The results indicated a correlation between positive emotions (happy, love) and positive characteristics of singing (open, consistent breath support), as well as between negative emotions (sad, anger) and negative characteristics of singing (under or above pitch, bad posture). This research is supported by MSU Undergraduate Research Fellowship.

Project Dissemination:

Osborn, Kaitlyn S. and Dr. Prindle, Roma. (2018), The Psychology of Singing: The Effects of Emotions on the Vocie. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Accepted into MS Clinical Psychology program at Morehead State University.

Wood, Austin

Major:

Music Education

Faculty Mentor:

Michele Paynter Paise

Research/Project Title:

Movement in the Elementary General Music Classroom: Developmentally Appropriate Practice

Project Abstract/Summary:

Research suggests that using movement in music instruction engages the brain in a unique way. In this study, I explored the effects of movement while teaching two second-grade classes a new song. One group learned the song with movement, while the other learned it without. Each second grade class was recorded singing on the day I taught the song and then again a week later. Although one of the groups performed better in most areas initially, the group that was taught the song with movement performed more consistently a week after being taught the new song. This was especially evident with regard to the text, rhythm, sense of ensemble, and intonation. While these findings suggest that movement may help elementary students retain the ability to perform music after a set amount of time has passed, more research must be done, with larger groups and more diverse students.

Project Dissemination:

Wood, Austin J., Movement in the Elementary General Music Classroom: Developmentally Appropriate Practice. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Wood, Austin J., Movement in the Elementary General Music Classroom: Developmentally Appropriate Practice. Poster presentation, Posters at the Capitol, Frankfort, KY, February, 2018.

Publication in progress.

Awards and/or Honors:

Certificate of Merit – Celebration of Student Scholarship.

Participant – Posters at the Capitol.

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF SOCIOLOGY, SOCIAL WORK AND CRIMINOLOGY

Guerin, Abbey

Major:
Sociology

Faculty Mentor:
Bernadette Barton

Research/Project Title:
Raunch Culture President

Project Abstract/Summary:
Raunch culture, which describes the hyper-sexualized world we live in, influences daily social life. Institutionalized sexism conditions boys and girls to look and act within the realm of societal norms, often silencing individual identity. The 45th presidential election brought several elements of raunch culture to the surface as Donald Trump exhibited and encouraged sexist behavior. Drawing on interview data with millennials, this presentation explores how e-bile, celebrity culture, internet pornography, and raunch culture work together to normalize the objectification of women, and habitaute internet users to uncivil discourse, in particular degrading and bullying language toward minority members. This presentation shows how raunch culture aided and abetted Trump's win, and continues to color elements of his administration. This research was supported by the MSU Undergraduate Research Fellowship program.

Project Dissemination:
Guerin, Abbey. (2018). Raunch Culture President. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Laskovtsov, Albina

Major:
Criminology

Faculty Mentor:
Rebecca Katz and Bernadette Barton

Research/Project Title:
Katz: Male Peer Support Theory: Murder and Sexual Assault
Barton: Raunch Culture: What It Is and Why It Matters

Project Abstract/Summary:
Katz:
This paper unravels hero-worshipping organizations such as athletic organizations, soldiers and police by exposing them as colonizers of men's and women's bodies (Benard, 2016; Smith, 2003). The idealization and worship of these men as hegemonic masculine heroes in patriarchal organizations obscures the methods of subordination and subjugation of victims' bodies through rape and murder. We examine several levels of the colonization process including murder and rape and the institutional performances in protecting, defending or ignoring perpetrators as victims' voices are suppressed (Stiglemayer, Faber Enloe, and Gutman, 1994).
Barton:
"Raunch" culture, sometimes called the sexualization of culture, describes a hyper-sexualized climate that Oversexualizes women while encouraging women to sexualize other women and themselves. Raunch culture influences much of our social life. Drawing on observation at five parties, and interviews with 12 women about their experiences at college parties, this presentation explores manifestations of raunch culture at college parties. This research finds that some male party-goers display an aggressive entitlement to female bodies that we speculate is a consequence of sexist cultural norms.

Project Dissemination:
Katz:
This paper was presented at the American Society of Criminology Annual Convention in November 15-18 in Philadelphia, PA.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Albina graduated in December of 2017 and plans on attending graduate school at Eastern Kentucky University in the near future.

Stamm, Mason

Major:

Agriculture

Faculty Mentor:

Elizabeth Perkins

Research/Project Title:

Exploring Homeless Males' Vulnerability to the Human Trafficking Industry

Project Abstract/Summary:

Interviews were conducted with forty-one homeless males in Louisville, Kentucky, in an attempt to gain a greater understanding of the prevalence of sex trafficking among this population. This project is significant because there is a scarcity of information available concerning males as the focused group in the sex trafficking literature; as females have traditionally been the targeted population group for data collection. Homeless males between the ages of 17-22 were the targeted population for this study. Participants were located via homeless outreach workers in Louisville, shelters, and high traffic areas and regions of homeless transient individuals. With this population, homeless young males, we aim in identifying the intersections and characteristics which may contribute to exposure to the sex trafficking industry. This project is supported by MSU Undergraduate Research Fellowship.

Project Dissemination:

McKinley Flint, Mason Stamm, Patrick Carlisle, Chelsea Dyer, and Perkins, Elizabeth (2018, April). The Vulnerability of Homeless Males to Sex Trafficking. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Plans to find work in either the law enforcement or agriculture field. Mason has been offered several jobs both in agriculture and working as a first responder. He is currently in negotiations for his first choice.

KENTUCKY CENTER FOR TRADITIONAL MUSIC

Lindsey, Brandon

Major:

ECET Major/Music Studies

Faculty Mentor:

Jesse Wells

Research/Project Title:

Traditional Music Archive Research Assistant, Banjoist

Project Abstract/Summary:

Preservation of Kentucky Center for Traditional Music's Traditional Music Archive's banjo related materials (lessons, articles, and photographs) via conversion to archival quality digital conversions. Development of banjo lesson materials pertaining to banjo mechanics and styles specific to students and professional music.

Project Dissemination:

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Full-time Entrepreneur and solo artist plans. Working on creating a personal brand as a musician and instructor.

COLLEGE OF EDUCATION

DEPARTMENT OF EARLY CHILDHOOD, ELEMENTARY AND SPECIAL EDUCATION

Boyd, Hayley

Major:
Community Support Services

Faculty Mentor:
Kim Nettleton

Research/Project Title:
Mentoring Pre-Service Teachers into the Profession

Project Abstract/Summary:
The professional preparation programs for the education profession are being challenged to change the ways in which preservice teachers are trained. Collaborative partnerships between the university and local schools are developing. Currently, there is a heavy emphasis on establishing strong mentorships between experienced teachers and preservice teachers. How effective is mentoring? What are the lasting results: Are mentors better teachers once they have provided leadership and guidance to a preservice teacher or do they just pass on poor teaching skills? This study examined the question of how mentoring effects educators.

Project Dissemination:
The project was presented at the Celebration of Student Scholarship. Hayley will be ending the project this May, but her partner, Breanna, will write an article on the project next fall to send to the School-University Partnership and will submit the abstract to the National Association of Professional Development School Conference to present in February 2019.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Cottrell, Brianna

Major:
Education/P5

Faculty Mentor:
Kim Nettleton

Research/Project Title:
Teacher to Teacher: Mentoring Preservice Teachers into the Profession

Project Abstract/Summary:
The professional preparation programs for the education profession are being challenged to change the ways in which preservice teachers are trained. Collaborative partnerships between the university and local schools are developing. Currently, there is a heavy emphasis on establishing strong mentorships between experienced teachers and preservice teachers. How effective is mentoring? What are the lasting results: Are mentors better teachers once they have provided leadership and guidance to a preservice teacher or do they just pass on poor teaching skills? This study examined the question of how mentoring effects educators.

Project Dissemination:
Cotrell, B. (2018). Teacher to Teacher: Mentoring Preservice Teachers into the Profession. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Mullins, Caitlyn

Major:

P-5/MSD

Faculty Mentor:

Daniel Grace

Research/Project Title:

1. A Comparison of Standard Outcomes for Teacher Education Candidates Enrolled in the P-5 Education and Special Education Programs
2. Efficacy and Fidelity of Implementation of a School-Wide Management System: Positive Behavior Interventions and Supports (PBIS).

Project Abstract/Summary:

1. Standard outcomes of Teacher Education Programs consist of Clinical Practice (CP) observations, the Principles of Learning and Teaching (PLT) licensure examination, and the Teacher Performance Assessment (TPA) implemented during CP. Special Education candidates would be better prepared due to their more extensive preparation. Results taken from analyses of the standard measures from 2011 to 2017 showed no differences on the CP and TPA measures but on the PLT measure Special Education candidates scored 3% higher on average than their P-5 peers.
2. Positive Behavior Interventions and Supports (PBIS) is a school-wide system for establishing consistent responses to student behaviors that emphasize desired behaviors while also addressing the student needs apparent when their behavior is inappropriate. All classroom teachers in an elementary school of approximately 450 students were observed several times during a semester. Results show that early grade teachers used more positive statements versus those in upper elementary grades, but that throughout the school there was signficant inconsistency in the fidelity of implementation of a PBIS-based token economy system, with this inconsistency representing the antithesis of PBIS functions.

Project Dissemination:

Mullins, C., & Grace, D. (2018, April). A Comparison of Standard Outcomes for Teacher Education Candidates Enrolled in the P-5 Education and Special Education Programs. Presentation in preparation.

Mullins, C., & Grace, D. (2018, April). Efficacy and Fidelity of Implementation of a School-Wide Management System: Positive Behavior Interventions and Supports (PBIS). Presentation in Preparation.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Preston, Shelby

Major:

P-5 Elementary/P-12 LBD

Faculty Mentor:

Sherry Stultz

Research/Project Title:

Best Practices for Teaching Reading to Secondary Students with a Specific Learning Disability: A Review of the Literature

Project Abstract/Summary:

This literature review aims to showcase effective reading strategies to implement in a secondary reading program for students with a specific learning disability. The review also discusses ineffective strategies that practitioners should avoid in a secondary reading program. The results of this review support what students have learned in their literacy instruction for students with a specific learning disability methods course. This analysis of the current body of literature highlights the need for more research to determine the most effective secondary reading strategies for students with a specific learning disability at each grade level.

Project Dissemination:

Preston, S., & Stultz, S. (2018, April). Best Practices for Teaching Reading to Secondary Students with a Specific Learning Disability: A Review of the Literature. Poster session, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Certificate of Participation in the College of Education Student Honors Reception.

Post-Graduation Plans (Seniors only):

Obtain a teaching position and begin graduate work soon thereafter.

DEPARTMENT OF FOUNDATIONAL AND GRADUATE STUDIES IN EDUCATION

Aronhalt, Mallory

Major:
Secondary English Education

Faculty Mentor:
Lola Aagaard

Research/Project Title:
The Incorporation of Waldorf into Public Schools

Project Abstract/Summary:
This research study investigated Waldorf education, as developed by Rudolf Steiner in Germany in the early 1900s. Information was gathered through a combination of literature review, interviews with American Waldorf teachers, and observation at a Waldorf school in Ohio. Although some of the spiritual elements of Steiner's philosophy remain controversial, educators cannot afford to overlook the effective teaching methods of the Waldorf school. If public schools were to implement some of the Waldorf school's elements, the nature of public education could change for the better. Public education could be improved by incorporating the Waldorf school's focus on developing imagination and creativity in the child; implementing an educational system based primarily on the psychological and physical development of the child; and shaping a child who is directly, genuinely, and physically aware of the natural world around him or her. Such an educational system could have profound effects on the intellectual, emotional, and physical growth of the child, resulting in a more confident, well-rounded, creative adult. This project was supported by an Undergraduate Research Fellowship.

Project Dissemination:
Aronhalt, M. (2018, April). The Incorporation of Waldorf into Public Schools. Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF MIDDLE GRADES AND SECONDARY EDUCATION

Ball, Joseph Cade

Major:
Middle Grades Education

Faculty Mentor:
Sara Lindsey

Research/Project Title:
The Benefits of International Studies for American Education Students

Project Abstract/Summary:
The purpose of this research project was to examine the benefits of international educational experiences for American students to investigate similarities and differences in educational practices between specific successful European countries and the United States. From this, the expectation was to begin writing a course proposal that would focus on students traveling to these countries and examining elements considered to be key within the systems.

Countries were identified using results of international testing programs and via cost of living analysis (it is considered that college students have limited budgets). As many criteria as possible were selected and an analysis of each country was begun.

The results of this part of the research project were presented at Posters-at-the-Capitol in Frankfort.

Project Dissemination:
Bell, J. Cade and Lindsey, S.J. (2018, February). The Benefits of International Studies for American Education Students. Poster session presented at Seventeenth Annual Posters-at-the-Capitol, Frankfort, Kentucky.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Burke, Stephen

Major:

MSU Teach Biology

Faculty Mentor:

David Long

Research/Project Title:

Examining Attitudes and Understanding of Student Attitudes toward Evolution, Climate Change, and Genetic Engineering

Project Abstract/Summary:

Stephen Burke has been engaged in primary background research and qualitative data analysis (interview data and focus groups) during the 2017-18 academic year. This coming year, Stephen will turn toward manuscript writing for academic publication as well as conference dissemination. His work has primarily focused on the following areas:
*Background reading to gain understanding of involved content.
*Data analysis of interview/focus group data to identify salient codes.
*Primary coding of data.
*Familiarity with contextually germane related studies in preparation for dissemination.

Project Dissemination:

Dissemination activities will begin this coming (2018-19) academic year. We are planning on a publication in peer reviewed science education journals as well as presenting at a state and national conference.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Even though by hour classification I am a senior, I joined the MSUTeach program late and am currently taking classes to meet those program requirements. After completing one more semester of core classes, and then a spring semester of Apprentice Teaching I hope to finish my certification for secondary sciences and teach at a local high school.

Elswick, Justin

Major:

Spanish

Faculty Mentor:

Lesia Lennex and April Reefer

Research/Project Title:

Technology in the Secondary Schools

Project Abstract/Summary:

Research with 3D technologies and 1:1 initiatives in secondary (grades 8-12) school instruction involving the curriculum construction, delivery, and analysis of learning is intended for 2017-2018. We plan to construct, deliver, and analyze the learning and achievement of students within this school year so that curriculum development with 3D and 1:1 to be disseminated to professional communities.

The research successfully produced hydropower curriculum and related 3D technologies for projects in grades 6-12.

Project Dissemination:

Lennex, Lesia, & Elswick, Justin (2017, October) Ongoing consultation in production of marketing for MSU Housing.

Lennex, Lesia, & Elswick, Justin (2018, February). The Awesome Art of Engineering. Kentucky Association of Gifted Educators. Lexington, KY: KAGE.

Lennex, Lesia, & Elswick, Justin (2017, November). 3D! Part 2. College of Education presentation. Morehead, KY: COE. https://llennex.wixsite.com/kage2017/practice.

Lennex, Lesia, & Elswick, Justin (2017, November). 3D! Part 1. College of Education presentation. Morehead, KY: COE. https://llennex.wixsite.com/kage2017/resources.

Lennex, Lesia, & Elswick, Justin (2018, May). New Technologies and How to Use Them: 3D and Makerspaces Demystified. Pedagogicon. Richmond, KY: Council on Post-Secondary Education.

Under the mentorship of Dr. Lesia Lennex and Dr. April Reefer:

Elswick, Justin, Lennex, Lesia, & Reefer, April Haight (2018, February). 6th -12th Grades Engineering Project: Turbine Design. Posters-at-the-Capitol, Frankfort, KY: http://digitalcommons.murraystate.edu/postersatthecapitol/

Elswick, Justin, Lennex, Lesia, & Reefer, April Haight. (2018, April). 6th -12th Grades Engineering Project: Turbine Design. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Lennex, Lesia, Reefer, April Haight & Elswick, Justin (2018, March). Engineering Creativity Among Grades 6-12: Hydropower Design. Society for Information Technology and Teacher Education. Washington, D.C.: AACE.

Lennex, Lesia, & Elswick, Justin (2018). Introduction to 3D Engineering Through Scale Models. Society for Information Technology and Teacher Education, Washington D.C.: AACE.

Lennex, Lesia, Elswick, Justin, & Eguchi, Amy (2018, March). SITE 2018 Presentation Panels (a Series of Three Panels) What is an Emerging Technology? The SITE Community's Perspective. Society for Information Technology and Teacher Education. Washington, D.C.: AACE.

Lennex, Lesia, and Elswick, Justin, (2018). "Art of Miniatures - KAGE 2018" Department of Middle Grades and Secondary Education Research & Publication Archives. 7. https://scholarworks.moreheadstate.edu/dept_middlegrades_2nded/7

Reefer, April Haight, Lennex, Lesia, & Elswick, Justin (2017, September). Turbine Engineer: E-STEM Lesson. Kentucky Association of Environmental Educators. Gilbertsville, KY: KAEE. https://www.kaee.org/conference.html

Reefer, April Haight, Lennex, Lesia, & Elswick, Justin (2017). Turbine Engineer: E-STEM Lesson. In Kentucky Association of Environmental Educators. https://scholarworks.moreheadstate.edu/dept_middlegrades_2nded/3/: Morehead State University, ScholarWorks. https://scholarworks.moreheadstate.edu/dept_middlegrades_2nded/3/

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Justin has been accepted to MAT in order to complete Spanish certification.

Purdum, Kelsey L.

Major:

P-5 Education

Faculty Mentor:

Kimberlee Sharp

Research/Project Title:

Elementary Teachers' Experiences and Attitudes using Informational Tests to Teach Social Studies

Project Abstract/Summary:

One component of the United States' public school curriculum core is social studies. Since the No Child Left Behind Act (2001), social studies instruction in our nation's elementary schools has suffered marginalization in the forms of reduced instructional time, elimination in grades where it is not tested, and integration with other subjects. The NCLB act overlooked social studies in its mandated accountability provisions, as in its original language, only mathematics, reading, and writing were included among the tested subjects for determining school effectiveness and student success. Significant research has been conducted since 2001 to show the effects of social studies' omission from NCLB on teaching and learning. Some of this research has included elementary teachers' instructional practices and decision-making during the NCLB era, especially with regard to integrating social studies with other core subjects. One subject in which social studies has been shown to be integrated with in the elementary grades is English language arts/reading. This specific study will examine the social studies – ELA/reading integration more closely in order to better understand the emphasis elementary teachers in eastern Kentucky place on social studies content knowledge by ascertaining their instructional purposes (e.g., to teach social studies content, to teach ELA/reading skills, or both), factors influencing teachers' instructional decisions (e.g., state and national social studies standards, ELA Common Core standards, or both, administrative leadership), and teachers' assessment criteria (e.g., social studies content, ELA/reading skills, or both).

Project Dissemination:

Purdum, K.L., & Sharp, K.A. (2018, February). Elementary Teachers' Experiences using Informational Texts to Teach Social Studies in Eastern Kentucky. Poster session presented at Seventeenth Annual Posters-at-the-Capitol, Frankfort, KY.

Purdum, K.L., & Sharp, K.A. (2018, April). Elementary Teachers' Experiences using Informational Texts to Teach Social Studies in Eastern Kentucky. Poster session, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Sharp, K.A. & Purdum, K.L. (2018, November). Informational Texts: A Key to Revitalizing Elementary Social Studies? Poster session at the 98th Annual Conference of the National Council for the Social Studies, Chicago, IL. (Proposal accepted).

Sharp, K.A. & Purdum, K.L. (2018, September). Informational Texts: A Key to Revitalizing Elementary Social Studies in Kentucky? Presentation at the Annual Conference of the Kentucky Council for the Social Studies, Lexington, KY. (Proposal submitted/under review).

Sharp, K.A. & Purdum, K.L. (2018). Title Pending. Manuscript for publication. (In progress).
Purdum, K.L. & Sharp, K.A. (2018). Title Pending. Manuscript for publication consideration in Kentucky Journal of Undergraduate Scholarship. (In progress).

Awards and/or Honors:

2018 Celebration of Student Scholarship, Morehead, KY.
Recipient of “Exceptional Merit” award for her poster presentation titled, Elementary Teachers’ Experiences using Informational Texts to Teach Social Studies in Eastern Kentucky.

Post-Graduation Plans (Seniors only):

N/A

Vanagen, Lars

Major:

Education/Social Studies

Faculty Mentor:

Lesia Lennex/April Reefer

Research/Project Title:

The Green Engineering Survey for the Turbine Project

Project Abstract/Summary:

The research involved the development of a survey about teachers’ professional development needs related to the engineering component of the Next Generation Science Standard, as well as the teachers’ perception of their ability to implement engineers and technology into Next Generation Science Standard lessons.
The research successfully developed and piloted a survey that will be administered by Dr. Lesia Lennex and Dr. April Reefer.

Project Dissemination:

The survey was piloted just before Lars Vanagen’s graduation. Additionally, there was a delayed start date. As a result he only worked one month.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Vanagen plans on teaching elementary school at Tiger Creek Elementary.

COLLEGE OF SCIENCE

DEPARTMENT OF AGRICULTURAL SCIENCES

Bosley, Briana

Major:

Agriculture

Faculty Mentor:

Patricia Harrelson

Research/Project Title:

Use of G-MANNA-CEL Mineral to Mitigate Fescue Toxicosis in Beef Cattle

Project Abstract/Summary:

In the southeast portion of the U.S., fescue is a common forage plant found in livestock pastures. However, it has been known to cause side effects in cattle that graze it due to an endophyte fungus which resides within the plant. The endophyte produces ergot compounds that have been attributed to the cause of fescue toxicity. As a result, fescue toxicity has been monitored and shown to affect 8.5 million beef cows (Ball et al., 1996). Many researchers have done extensive work to alleviate the three disorders commonly seen from grazing fescue: fescue foot, bovine fat necrosis, and summer slump. Summer slump is one of the most recognizable disorders and more often than not, is seen in cattle grazing fescue pastures over the summer months, as cattle with summer slump often exhibit a wide range of symptoms. Symptoms include decreased weight gain, decreased milk production, rough hair coats, decreased conception rates, heat intolerance, elevated body temperature, and increased respiration rate in beef cattle (Bush et al., 1979; Crawford et al., 1989; Garner and Cornell, 1978; Hoveland et al., 1983; Stuedemann and Hoveland, 1988). Researchers have suggested prevention of fescue toxicity through removal of fescue from pastures, sowing endophyte-free fescue, supplementation with protein or thiamin or copper, using estrogenic implants, injecting a dopamine antagonist, feeding seaweed, and using glucomannan derived from yeast (Waller, 2009). The glucomannan yeast product has been developed by a couple of companies, including Gro-Tec, Inc. Through recent conversations with Gro-Tec, they have indicated a desire for us to evaluate their product's efficacy at preventing fescue toxicity.

We propose to use our mature cowherd that normally grazes pastures containing fescue over the summer months. We will split the mature cowherd into two groups, a control and a treatment group that will receive their normal mineral with the addition of the glucomannan yeast product. We will monitor the cattle from mid-May to mid-October when cattle are removed from pastures. During this period, we will take weekly weights from calves and cows, weekly body condition scores from cows, along with daily temperatures from cows. This will enable us to monitor the impacts of summer slump and therefore fescue toxicity.

Project Dissemination:

Harrelson, P.L., C.B. Rogers, R.A. Martin, B.N. Bosley, F.M. Kilgallin, and F.W. Harrelson. 2018. Effect of a Hydrolyzed Yeast Product on Body Weight, Body Condition Score, and Hair Coat Score in Cows Grazing Endophyte-Infected Tall Fescue. Southern Section of American Society of Animal Science Annual Meeting, Fort Worth, TX.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Entered industry for career.

Emery, Audrey

Major:

Veterinary Science

Faculty Mentor:

Patricia Harrelson

Research/Project Title:

Influence of Feeding TransRite Sow Ultra to Sows on Urine pH, Stillborn Rate, Farrowing Length

Project Abstract/Summary:

The project will last for at least one academic year (through May 2018) and will consist of evaluating characteristics of farrowing such as birth weight, stillborn rate, farrowing length, birth interval, and more. The sows will either serve as the control (0 g of TransRite Sow Ultra) or 25 g/hd of TransRite Sow Ultra for 3 days prior to parturition. The sows will be monitored at birth and measurements listed above plus more will be collected. In previous research, a calcium supplement 3-5 days prior to farrowing has reduced the number of stillborn deaths, decreased time spent farrowing, and has increased the viability of the piglets. Researchers believe that the added calcium changes the electrolyte balance and increases uterine contractions.

Project Dissemination:

Moore, C.K., A.L.Emery, D.Q. Siefert, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Calcium Supplementation on Gestation Length, Number Born Live, and Number of Stillborns. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Emery, A.L., D.Q. Siefert, C.K. Moore, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Gestation Length on Litter Size and Piglet Birth Weight. Celebration of Student Scholarship, Morehead State Uiversity, Morehead, KY, April, 2018.

Emery, A.L., D.Q. Siefert, C.K. Moore, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Sire Breed on Gestation Length, Piglet Birth Weight, Litter Weight, and Litter Size. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Certificates of Merit – Poster presentation, Celebration of Student Scholarship, April, 2018.

Moore, C.K., A.L. Emery, D.Q. Siefert, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Calcium Supplementation on Gestation Length, Number Born Live, and Number of Stillborns. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Post-Graduation Plans (Seniors only):

Will be attending Veterinary School at Lincoln Memorial.

Kilgallin, Frank

Major:

Agriculture

Faculty Mentor:

Patricia Harrelson

Research/Project Title:

Use of G-MANNA-CEL Mineral to Mitigate Fescue Toxicosis in Beef Cattle

Project Abstract/Summary:

In the southeast portion of the U.S., fescue is a common forage plant found in livestock pastures. However, it has been known to cause side effects in cattle that graze it due to an endophyte fungus which resides within the plant. The endophyte produces ergot compounds that have been attributed to the cause of fescue toxicity. As a result, fescue toxicity has been monitored and shown to affect 8.5 million beef cows (Ball et al., 1996). Many researchers have done extensive work to alleviate the three disorders commonly seen from grazing fescue: fescue foot, bovine fat necrosis, and summer slump. Summer slump is one of the most recognizable disorders and more often than not, is seen in cattle grazing fescue pastures over the summer months, as cattle with summer slump often exhibit a wide range of symptoms. Symptoms include decreased weight gain, decreased milk production, rough hair coats, decreased conception rates, heat intolerance, elevated body temperature, and increased respiration rate in beef cattle (Bush et al., 1979; Crawford et al., 1989; Garner and Cornell, 1978; Hoveland et al., 1983; Stuedemann and Hoveland, 1988). Researchers have suggested prevention of fescue toxicity through removal of fescue from pastures, sowing endophyte-free fescue, supplementation with protein or thiamin or copper, using estrogenic implants, injecting a dopamine antagonist, feeding seaweed, and using glucomannan derived from yeast (Waller, 2009). The glucomannan yeast product has been developed by a couple of companies, including Gro-Tec, Inc. Through recent conversations with Gro-Tec, they have indicated a desire for us to evaluate their product's efficacy at preventing fescue toxicity.

We propose to use our mature cowherd that normally grazes pastures containing fescue over the summer months. We will split the mature cowherd into two groups, a control and a treatment group that will receive their normal mineral with the addition of the glucomannan yeast product. We will monitor the cattle from mid-May to mid-October when cattle are removed from pastures. During this period, we will take weekly weights from calves and cows, weekly body condition scores from cows, along with daily temperatures from cows. This will enable us to monitor the impacts of summer slump and therefore fescue toxicity.

Project Dissemination:

Harrelson, P.L., C.B. Rogers, R.A. Martin, B.N. Bosley, F.M. Kilgallin, and F.W. Harrelson. 2018. Effect of a Hydrolyzed Yeast Product on Body Weight, Body Condition Score, and Hair Coat Score in Cows Grazing Endophyte-Infected Tall Fescue. Southern Section of American Society of Animal Science Annual Meeting, Fort Worth, TX.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Entered industry for career.

Moore, Courtney

Major:

Agricultural Science

Faculty Mentor:

Patricia Harrelson

Research/Project Title:

Influence of Feeding TransRite Sow Ultra to Sows on Urine pH, Stillborn Rate, Farrowing Length

Project Abstract/Summary:

The project will last for at least one academic year (through May 2018) and will consist of evaluating characteristics of farrowing such as birth weight, stillborn rate, farrowing length, birth interval, and more. The sows will either serve as the control (0 g of TransRite Sow Ultra) or 25 g/hd of TransRite Sow Ultra for 3 days prior to parturition. The sows will be monitored at birth and measurements listed above plus more will be collected. In previous research, a calcium supplement 3-5 days prior to farrowing has reduced the number of stillborn deaths, decreased time spent farrowing, and has increased the viability of the piglets. Researchers believe that the added calcium changes the electrolyte balance and increases uterine contractions.

Project Dissemination:

Moore, C.K., A.L. Emery, D.Q. Siefert, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Calcium Supplementation on Gestation Length, Number Born Live, and Number of Stillborns. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Emery, A.L., D.Q. Siefert, C.K. Moore, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Gestation Length on Litter Size and Piglet Birth Weight. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Emery, A.L., D.Q. Siefert, C.K. Moore, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Sire Breed on Gestation Length, Piglet Birth Weight, Litter Weight, and Litter Size. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Certificates of Merit – Poster Presentation at Celebration of Student Scholarship, April, 2018.

Moore, C.K., A.L. Emery, D.Q. Siefert, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Calcium Supplementation on Gestation Length, Number Born Live, and Number of Stillborns. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Post-Graduation Plans (Seniors only):

N/A

Siefert, Dillon

Major:

Veterinary Science

Faculty Mentor:

Patricia Harrelson

Research/Project Title:

Influence of Feeding TransRite Sow Ultra to Sows on Urine pH, Stillborn Rate, Farrowing Length

Project Abstract/Summary:

The project will last for at least one academic year (through May 2018) and will consist of evaluating characteristics of farrowing such as birth weight, stillborn rate, farrowing length, birth interval, and more. The sows will either serve as the control (0 g of TransRite Sow Ultra) or 25 g/hd of TransRite Sow Ultra for 3 days prior to parturition. The sows will be monitored at birth and measurements listed above plus more will be collected. In previous research, a calcium supplement 3-5 days prior to farrowing has reduced the number of stillborn deaths, decreased time spent farrowing, and has increased the viability of the piglets. Researchers believe that the added calcium changes the electrolyte balance and increase uterine contractions.

Project Dissemination:

Moore, C.K., A.L. Emery, D.Q. Siefert, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Calcium Supplementation on Gestation Length, Number Born Live, and Number of Stillborns. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Emery, A.L., D.Q. Siefert, C.K. Moore, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Gestation Length on Litter Size and Piglet birth Weight. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Emery, A.L., D.Q. Siefert, C.K. Moore, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Sire Breed on Gestation Length, Piglet Birth Weight, Litter Weight, and Litter Size. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

Certificates of Merit – Poster Presentation at Celebration of Student Scholarship, April, 2018.

Moore, C.K., A.L. Emery, D.Q. Siefert, F.W. Harrelson, and P.L. Harrelson. (2018, April). Effect of Calcium Supplementation on Gestation Length, Number Born Live, and Number of Stillborns. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Post-Graduation Plans (Seniors only):

Graduates in December 2018.

DEPARTMENT OF BIOLOGY AND CHEMISTRY

Anwar, Amina

Major:

Biomedical Science

Faculty Mentor:

Geoffrey Gearner

Research/Project Title:

The Use of eDNA to Detect Bacterial Molecular Markers in the Triplett Creek Watershed

Project Abstract/Summary:

The objective of this study is to develop the use of bacterial genetic targets as markers of fecal contamination in the Triplett Creek Watershed. The Triplett Creek Watershed has been the focus of assessment and research by Morehead State scientists for well over ten years. Twelve sites were chosen because they exhibit chronically high *Escherichia coli* counts (>240 *E. coli* CFU/100 mL), or acceptable *E. coli* counts (<240 *E. coli* CFU/100 mL). Bacteria isolated from the sampling sites using the membrane filtration method were enriched in culture medium. DNA was subsequently isolated from the bacterial cultures and analyzed by polymerase chain reaction utilizing primers for 16s rRNA (bacterial marker), *esp* (human enterococcus marker), *uidA* (*Escherichia coli* marker), and a variety of antibiotic resistance genes. PCR products were assessed by agarose gel electrophoresis. All 12 sampling sites were positive for bacterial DNA, 11 of 12 sites were positive for *E. coli* DNA, and 4 of 12 sites were positive for the enterococcus marker. Several different antibiotic resistance genes were also detected in some of the sampling sites. The results demonstrate the ability to detect bacterial molecular markers in environmental water samples, allowing us to develop this further for *E. coli* source tracking in the Triplett Creek Watershed. This project was supported in part by MSU's Undergraduate Research Fellowship Program.

Project Dissemination:

2018. Conley, H., Anwar, A., and G. W. Gearner. Polymerase Chain Reaction Detection of Bacterial DNA Markers in the Triplett Creek Watershed. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Blanton, Sydney P.

Major:

Biomedical Science

Faculty Mentor:

Geoffrey Gearner

Research/Project Title:

The use of eDNA to Detect Bacterial Molecular Markers in the Triplett Creek Watershed

Project Abstract/Summary:

The objective of this study is to develop and evaluate the use of bacterial genetic targets as markers of fecal contamination in the Triplett Creek Watershed. The Triplett Creek Watershed has been the focus of assessment and research activities by Morehead State University scientists for well over ten years now. In this project, one-liter water samples were collected from watershed sampling sites. The sites were chosen because they exhibit chronically high Escherichia coli counts (>240 E. coli CFU/100 mL), or acceptable E. coli counts (<240 E. coli CFU/100 mL). DNA was extracted from the water samples and purified using commercial kits, then assessed spectrophotometrically for quantity and purity. The environmental DNA (eDNA) was used as a target for polymerase chain reaction to detect markers for enteric bacteria, E. coli, and a variety of antibiotic resistance genes.

PCR products were analyzed by agarose gel electrophoresis. Some of the eDNA samples were positive for enteric bacteria, E. coli and the ß-lactamase gene, blaTEM. The results demonstrate the ability to detect bacterial molecular markers in DNA collected directly from environmental water samples, allowing us to develop this further for E. coli source tracking in the Triplett Creek Watershed. This project is supported by a Kentucky Water Resources Research Institute 104b Student Enhancement Project grant via the U. S. Geological Survey.

Project Dissemination:

Anticipated presentation venues include the 2018 Annual Meeting of the Kentucky Academy of Sciences and the 2019 Morehead State University Celebration of Student Scholarship.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Sydney has been accepted to the University of Kentucky's Early Assurance Rural Physician Leadership Program (medical school). She will enter the program in Fall 2020.

Branham, Kathryn

Major:

Biology

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Beetles – Nature's Biodiversity Litmus Paper: A Survey of the Biodiversity of Coleoptera within the Daniel Boone National Forest

Project Abstract/Summary:

Among the various organisms found in Kentucky, none are quite as diverse as those of the order Coleoptera. Beetles can be found in virtually every ecological niche within a region. There are carnivorous beetles, herbivores, coprophages, and even cannibalistic beetles. Beetles are a great indicator of biodiversity because they are numerous, easy to collect, and are not currently at risk for extinction. To explore the biodiversity of the region surrounding the Daniel Boone National Forest, various trapping methods were utilized, including pan traps, Lindgren funnel traps, black lighting, and Berlese funnels. Each method captured a unique type of beetle. For example, Lindgren funnel traps captured beetles that flew approximately five feet off the ground at a tree line. Pan traps captured ground dwelling beetles, black lighting attracted nocturnal beetles, and Berlese funnels focused on beetles found in leaf litter. From these trapping methods, beetles were captured, pinned, pointed, and finally categorized by family to discern differences in niches among the various organisms. This study will serve as a precursor to a larger study on biodiversity of beetles to be completed next year.

Project Dissemination:

Presentation – 2018 Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Conley, Hannah

Major:

Biomedical Science

Faculty Mentor:

Geoffrey Gearner

Research/Project Title:

The Use of eDNA to Detect Bacterial Molecular Markers in the Triplett Creek Watershed

Project Abstract/Summary:

The objective of this study is to develop the use of bacterial genetic targets as markers of fecal contamination in the Triplett Creek Watershed. The Triplett Creek Watershed has been the focus of assessment and research by Morehead State scientists for well over ten years. Twelve sites were chosen because they exhibit chronically high *Escherichia coli* counts (>240 *E. coli* CFU/100 mL), or acceptable *E. coli* counts (<240 *E. coli* CFU/100 mL). Bacteria isolated from the samplings sites using the membrane filtration method were enriched in culture medium. DNA was subsequently isolated from the bacterial cultures and analyzed by polymerase chain reaction utilizing primers for 16s rRNA (bacterial marker), *esp* (human enterococcus marker), *uidA* (*Escherichia coli* marker), and a variety of antibiotic resistance genes. PCR products were assessed by agarose gel electrophoresis. All 12 sampling sites were positive for bacterial DNA, 11 of 12 sites were positive for *E. coli* DNA, and 4 of 12 sites were positive for the enterococcus marker. Several different antibiotic resistance genes were also detected in some of the sampling sites. The results demonstrate the ability to detect bacterial molecular markers in environmental water samples, allowing us to develop this further for *E. coli* source tracking in the Triplett Creek Watershed. This project was supported in part by MSU's Undergraduate Research Fellowship Program.

Project Dissemination:

2018. Conley, H., Anwar, A., and G. W. Gearner. Polymerase Chain Reaction Detection of Bacterial DNA Markers in the Triplett Creek Watershed. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

2017. Conley, H., R. Brown, and G. W. Gearner. The Use of eDNA to Detect Bacterial Molecular Markers in the Triplett Creek Watershed Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2017. Hannah Conley received a Merit Award for the poster.

2017. Brown, R., H. Conley, and G. W. Gearner. The Use of Environmental DNA to Detect Bacterial Molecular Markers in the Triplett Creek Watershed, Rowan County, Kentucky. Kentucky Water Resources Annual Symposium, Lexington, KY, March, 2017.

Awards and/or Honors:

See above.

Post-Graduation Plans (Seniors only):

Hannah has been accepted into the University of Kentucky's Rural Physicial Leadership Program (medical school) and will start Fall 2018.

Dale, Jesseca

Major:

Biology

Faculty Mentor:

Allen C. Risk

Research/Project Title:

Lichen and Bryophyte Species Richness in Arboreal and Terrestrial Zones

Project Abstract/Summary:

The focus of this research project was to determine bryophyte and lichen species richness in arboreal and terrestrial zones in the Eagle Lake watershed. Lichens and bryophytes perform many important ecological roles in forests including conducting photosynthesis, air quality indication, and providing nesting material for organisms. Since forests are three dimensional, determination of lichen and bryophyte species richness is difficult because they are found on the ground and in the trees. Dr. Risk and I have established two 20 m X 20 m study plots. A white oak was chosen to center each plot and doubled rope technique was used to access the trunk and crowns of understory and overstory trees. Samples were collected from soil, rocks, woody debris, understory shrubs/trees, and a single overstory tree within each plot. Our results thus far include a total of 110 species. This number included 46 found in the arboreal zone only, 39 terrestrial zone only, and 25 species found in the arboreal and terrestrial zones. Our findings also indicated that 69% of lichen crusts occurred in arboreal zones only. Meanwhile, 0% of lichen crusts occurred in both arboreal and terrestrial zones..

Project Dissemination:

Poster presentation, Celebration of Student Scholarship, April, 2017, and oral presentation, Celebration of Student Scholarship, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Davis, Logan

Major:

Biomedical Sciences

Faculty Mentor:

David Peyton

Research/Project Title:

Coat Color Genetics in Modern Horse Breeds

Project Abstract/Summary:

We are investigating the interplay of six genes involved in pigmentation in horses. Previously obtained tissue samples from three horses will be used as a source of genomic DNA. Using published sequences from the horse genome we will design PCR primers to isolate and amplify genes involved in coat color, then compare sequences across different color specimens and across breeds to identify mutations correlated with coat color variation.

Project Dissemination:
N/A
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

DeBurger, Katherine

Major:
Biology
Faculty Mentor:
Allen C. Risk
Research/Project Title:
Dendroclimatology of the Forest Surrounding Eagle Lake, Rowan County, Fall 2017 - Present
Project Abstract/Summary:
Forests are critical ecosystems that improve air and water quality, provide natural flood control and habitats that promote biodiversity. Forests also contain many resources for human use, such as lumber and pharmaceutically useful substances. Thus, the relationship between environmental variables and forest growth is an important area of inquiry. Dendroclimatology is the study of the relationship between annual tree ring growth and climatic variables, such as temperature, precipitation, and drought. In order to assess this relationship, four 20x20 meter plots were randomly located within the Eagle Lake watershed. Two samples were taken using an increment borer, from each tree over 10 cm in diameter at breast height (DBH). Each core was dried, glued to a mount and sanded to expose the individual rings. After comparing the samples to determine their age, the rings were measured using a Velmex measuring system. 77 trees were sampled with 151 tree cores total, across 11 different species. Preliminary work was done with COFECHA for quality control using *Quercus alba* samples. Future work will include using COFECHA to provide quality control for all species, and standardizing ring widths with ARSTAN. Correlation analysis will be used to examine the relationship between the local climate data and standardized widths of each tree ring. A special thanks goes to the Pryor Fund for supporting the project and the Department of Chemistry and Biology at MSU.
Project Dissemination:
Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Eskridge, Jessie

Major:
Biomedical Sciences
Faculty Mentor:
Kurt Gibbs
Research/Project Title:
Quantifying microRNA Expression in the Regenerating Spinal Cord of Xenopus Laevis Tadpoles
Project Abstract/Summary:
Jessi was one of several students working on quantifying microRNA expression in the regenerating spinal cord of Xenopus laevis tadpoles. Jessi used in situ hybridization to identify the types of cells in the CNS that express our microRNAs of interest. Jessi worked well in the lab but was performing very challenging work for an undergraduate. We had a lot of trouble shooting and optimization to do with the miRNA in situ hybridization, and it took her the whole semester.
Project Dissemination:
We did not generate in my mind a sufficient amount of data to present at the Celebration of Student Scholarship.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
Jessi has graduated and is attending the University of Louisville Medical School.

Gibson, Danielle

Major:

Biology

Faculty Mentor:

Michael Fultz

Research/Project Title:

Holistic Review of Developing a Cell Culture System to Investigate the Effects of Microgravity on Cytoskeletal Remodeling in Smooth Muscle

Redesign of a Cell Culture System to Investigate the Effects of Microgravity on Cytoskeletal Remodeling in Smooth Muscle

Project Abstract/Summary:

There are few studies that have examined the effect of microgravity on the cytoskeleton in smooth muscle. Although they conclude that the phenotype of smooth muscle may be gravity dependent, those that have been performed have utilized simulated microgravity. Therefore, the effect of microgravity on the cytoskeletal elements essential for force generation and maintenance in smooth muscle remains poorly understood. The effect of microgravity on the alpha-actin, beta-actin, and myosin components of the cytoskeleton in resting and contracting A7r5 smooth muscle cells is the primary research focus. Collaboration between the Department of Biology and Chemistry, SpaceTango (Lexington, KY), and the Craft Academy for Excellence in Science and Mathematics, has resulted in a redesign of a cell culture system that will allow for the culture, visualization, stimulation, and subsequent fixation of A7r5 cells aboard the International Space Station (ISS). Previous designs were limited by power availability and a few technological mishaps that have been reworked for installation within TangoLab on the ISS, which will be reviewed. Upon return to Earth, components of the cytoskeleton will be examined by fluorescent microscopy to investigate if microgravity alters the characteristic remodeling observed on Earth.

Project Dissemination:

Danielle Gibson, Kaylee Whitenack, and Callie Arnold and Professor, Dr. Michael Fultz (2018, March). Redesign of a Cell Culture System to Investigate the Effects of Microgravity on Cytoskeletal Remodeling in Smooth Muscle*,* Poster presentation, Posters-at-the-Capitol, Frankfort, KY, March, 2018.

Danielle Gibson and Professor, Dr. Michael Fultz (2018, April). Holistic Review of Developing a Cell Culture System to Investigate the Effects of Microgravity on Cytoskeletal Remodeling in Smooth Muscle. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Danielle Gibson, Kaylee Whitenack, and Callie Arnold and Professor, Dr. Michael Fultz. Redesign of a Cell Culture System to Investigate the Effects of Microgravity on Cytoskeletal Remodeling in Smooth Muscle, Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Experimental Biology Conference in San Diego, CA. – Poster Presentation.

Awards and/or Honors:

Exceptional Merit, Oral Presentation, College of Science, Celebration of Student Scholarship, April, 2018.

Post-Graduation Plans (Seniors only):

N/A

Green, Lyndsey

Major:

Biology

Faculty Mentor:

Allen C. Risk

Research/Project Title:

Dendrochronology of Forests at Eagle Lake, Rowan County, Kentucky

Project Abstract/Summary:

Dendrochronology is the study of tree rings. Variation in tree ring widths can be informative as regards climate as well as forest disturbance patterns. Two increment cores were obtained from all trees with diameters greater than 10 cm in four 20 X 20 m plots located in the Eagle Lake watershed. The cores were allowed to dry, then glued to wooden mounts. Next, the samples were smoothed by sanding with six, successively finer grades of sandpaper. These steps were followed by assigning a calendar year to annual ring of each sample. Tree ring widths were then measured to the nearest 0.001 mm with a Velmex measuring system. A total of approximately 100 samples were obtained, processed, and measured in this manner The next steps will involve quality control, standardization of ring widths, and then correlation analysis. This research was supported by the Pryor Scholarship Fund.

Project Dissemination:

None. (Note from Allen C. Risk: Lyndsey decided to drop the research partway through the spring 2018 semester).

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Find employment.

Hereford, Elizabeth G.

Major:

Biology/Mathematics

Faculty Mentor:

David Peyton

Research/Project Title:

The Impact of Radioactive Shale on Stream Microbiology Ecosystems

Project Abstract/Summary:

This component of the project explores the impact of radioactive and heavy metal-containing black shales on the water quality of eastern Kentucky streams. Data collection includes radiation, microbiological, and aquatic environmental testing. Radiation testing entails placing devices for measuring ionizing radiation (dosimeters) in different locations throughout Rowan, Bath, Montgomery, Fleming, and Lewis County. Dosimeters are placed in various levels of geological formations including Huron, Sunbury, and Cleveland black shales and controls in sandstone, limestone, siltstone, and Bedford shale. Microbiological testing entails sampling water five times over a thirty-day period during the recreational season at stream sites related to black shale. Samples are analyzed for concentrations of *Escherichia coli*, heterotrophic bacteria, and total coliform bacteria utilizing the membrane filtration method and various culture media. Initial sampling began at three Rowan County sites, but will be expanded to sites in Bath, Montgomery, Fleming, and Lewis Counties. Aquatic environmental testing samples are collected at the same sites for measuring dissolved oxygen, pH, total dissolved solids, conductivity, temperature, and discharge. Previous research indicates that environmental factors contribute to cancer risk and this research aims to define the nature of the interaction to improve health outcomes in eastern Kentucky. This project was contributed with the Undergraduate Engagement Fellowship.

Project Dissemination:

Grothaus, M.T., Hereford, E.G., Grigsby, R.C., Mason, C.E., Gearner, G.W., Hare, T.S. (2018, April). Do Radioactive Black Shales Affect Water Quality in Eastern Kentucky Streams? Poster presentation, Celebration of Student Scholarships, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Howard, Cecelia

Major:

Biology

Faculty Mentor:

Janelle Hare

Research/Project Title:

Transformation of Acinetobacter Strains to Achieve Double Knockouts

Project Abstract/Summary:

Acinetobacter strains are opportunistic pathogens that can acquire antibiotic resistance. Constructing mutants in the lab provides information about a gene's activity in wildtype cells. Transforming wildtype strains of *Acinetobacter baumannii* and *Acinetobacter baylyi* with a streptomycin-spectinomycin (SS) resistant cassette will replace existing *umuDAb* and *ddrR* and confer resistance to the strain. Wildtype *A. baumannii* ATCC 17978 and *A. baylyi ACIAD2729* strains were transformed with previously constructed plasmid DNA with a double deletion of *umuDAb* and *ddrR*. To facilitate recombination of this SS mutation into the chromosome of bacteria, cells were transformed with plasmid DNA cut with *Eco*R1. Transformation was successful in one colony of *ACIAD 2729* cells; SS-specific primers verified presence of the SS cassette and the absence of *ddrR* and *umuDAb*. 17978 grew on SS plates, suggesting that the cassette, and thus the mutation, was successfully transferred to wildtype cells. PCR was conducted with primers amplifying the SS cassette in the genome or a different primer set, and no significant difference between wildtype and mutant bands was detected. Future experiments involve properly amplifying the target sequence of 17978 to achieve proper recombination and successful mutation of both genes.

This work was funded through KBRIN NIH 2P20RR016481-09 and NIH grant 2R15GM085722-03A1.

Project Dissemination:

We presented this work at the Celebration for Student Scholarship in April, 2018, in a poster, after working for one semester.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Applying for medical school in Summer 2018, and will graduate in Spring 2019.

Kiefer, Madelynn

Major:

Biology

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Developing an Understanding of Moth (Order Lepidoptera) Diversity through Collecting and Identification

Project Abstract/Summary:

Butterflies (order Lepidoptera) have long been admired for their natural beauty. However, moths, close relatives to butterflies, have often been neglected due to their mostly nocturnal nature, as well as many are fairly small, most are drab in color, and moths of many groups are difficult to identify. Moths require delicate and careful preparation and very careful handling because they are so fragile and the scales on the wings, critical for their identification are so easily lost. Moths can provide valuable information regarding the biodiversity of an area. The diversity of moths can indicate the diversity of plants within a region since all moths are herbivorous, many having a preference to a specific host plant. An inventory of moths will likely give an indication of the diversity of plants based on the abundance or even absence of certain species of moths. This study was conducted as an introduction to the process of collecting and identifying moths, especially those included in the families Noctuidae and Geometridae. This study is the foundation for a future investigation regarding the diversity of moths within Rowan County.

Project Dissemination:

Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Knox, Anna

Major:

Biomedical Sciences

Faculty Mentor:

Kurt Gibbs

Research/Project Title:

Characterizing the Microglial Response in Xenopus Laevis after Spinal Cord Injury

Project Abstract/Summary:

Xenopus laevis tadpoles exhibit the ability to regenerate central nervous system (CNS) tissue after injury, an ability which is lost after metamorphosis. In mammals, microglia respond to CNS injury by releasing inflammatory cytokines, negatively affecting the potential for functional recovery. Since microglia are the immune cells of the central nervous system, we hypothesized that the microglial response to CNS injury may be different between tadpoles and adult frogs. To test this hypothesis, we used two antibodies, AM20 and CL 21, to target specific proteins in microglia to allow their visualization. We then used immunofluorescent microscopy to view and quantify these inflammatory cells. The goal of this work is to understand the changing inflammatory response attributed to microglia at different stages of spinal cord injury, and determine its significance to regeneration of the CNS in Xenopus laevis. This work was supported by funding from NIH Institute of Child Health and Human Development (1 R15 HDO76643-01A1).

Project Dissemination:

Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Anna has graduated and is attending the University of Kentucky Medical School.

McMillin, Taelor

Major:

Biomedical Sciences

Faculty Mentor:

David Peyton

Research/Project Title:

Coat Color Genetics in Modern Horse Breeds

Project Abstract/Summary:

We are investigating the interplay of six genes involved in pigmentation in horses. Previously obtained tissue samples from three horses will be used as a source of genomic DNA. Using published sequences from the horse genome we will design PCR primers to isolate and amplify genes involved in coat color, then compare sequences across different color specimens and across breeds to identify mutations correlated with coat color variation.

Project Dissemination:

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Pollitt, Maggie

Major:

Biomedical Sciences

Faculty Mentor:

Kurt Gibbs

Research/Project Title:

Quantifying microRNA Expression in the Regenerating Spinal Cord of Xenopus Laevis Tadpoles.

Project Abstract/Summary:

Maggie was one of several students working on quantifying microRNA expression in the regenerating spinal cord of Xenopus laevis tadpoles. Maggie used qRT-PCT to validate RNA-seq data and in situ hybridization to identify the types of cells in the CNS that express our microRNAs of interest. Maggie did a great job on the qRT-PCR and generated good data. However, we had a lot of trouble with shooting and optimization to do with the miRNA in situ hybridization, and it took her the whole semester.

Project Dissemination:

We did not generate in my mind a sufficient amount of data to present at the Celebration of Student Scholarship.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Maggie has graduated and is attending law school at the University of Cincinnati on a “full-ride” scholarship.

Robinson, Miranda

Major:
Biomedical Sciences

Faculty Mentor:
David Peyton

Research/Project Title:
Coat Color Genetics in Modern Horse Breeds

Project Abstract/Summary:
We are investigating the interplay of six genes involved in pigmentation in horses. Previously obtained tissue samples from three horses will be used as a source of genomic DNA. Using published sequences from the horse genome we will design PCR primers to isolate and amplify genes involved in coat color, then compare sequences across different color specimens and across breeds to identify mutations correlated with coat color variation.

Project Dissemination:
N/A

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Rusnak, Kalee

Major:
Biology

Faculty Mentor:
Janelle Hare

Research/Project Title:
Transformation of Acinetobacter Strains to Achieve Double Knockouts

Project Abstract/Summary:
Acinetobacter strains are opportunistic pathogens that can acquire antibiotic resistance. Constructing mutants in the lab provides information about a gene's activity in wildtype cells. Transforming wildtype strains of Acinetobacter baumannii and Acinetobacter baylyi with a streptomycin-spectinomycin (SS) resistant cassette will replace existing umuDAb and ddrR and confer resistance to the strain. Wildtype A. baumannii ATCC 17978 and A. baylyi ACIAD2729 strains were transformed with previously constructed plasmid DNA with a double deletion of umuDAb and ddrR. To facilitate recombination of this SS mutation into the chromosome of bacteria, cells were transformed with plasmid DNA cut with EcoR1. Transformation was successful in one colony of ACIAD2729 cells; Ss-specific primers verified presence of the SS cassette and the absence of ddrR and umuDAb. In short, I achieved the goal set out for this semester: to make a double knockout of the ddrR and umuDAb genes in A. baylyi strain ADP1. Future experiments involve using transformed ACIAD 2729 in mutagenesis assays and RNA extraction.

This work was funded through KBRIN NIH 2P2ORRO16481-09 and NIH grant 2R15GM085722-03A1.

Project Dissemination:
Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
Ms. Rusnak is applying for medical school in Summer 2018, and will graduate in Spring 2019.

Slone, Chase Christopher Clark

Major:
Biomedical Sciences Area

Faculty Mentor:
Brandon VanNess

Research/Project Title:
Investigating the Effectiveness of the MacMillan Enantioselective Cross-Aldol Reaction towards the Synthesis of the Anti-Cancer Natural Produce, LMA-P2

Project Abstract/Summary:

This project focused on developing synthetic strategies to acquire the best yields possible for a MacMillan enantioselective cross aldol reaction. This can be financially costly in the laboratory when using expensive electrophilic receptor aldehydes, so it is important to find the minimum ratio of electrophilic acceptor to nucleophilic donor ratio necessary for this reaction. To achieve this goal, a series of reactions were set up following the conditions outlined by MacMillan, with variations to the electrophilic acceptor/nucleophilic donor ration to improve yield and reduce hazardous waste by performing this reaction at close to molar equivalence. A series of six different electrophilic acceptors were chosen, four of which had not been previously tested by MacMillan and were chosen to expand the effectiveness of the reaction on electrophilic acceptors aldehydes with a-hydrogens while the identity of the nucleophilic donor was kept constant as propionaldehyde; 10:1, 5:1, and 1:1 ratios were tested for the majority of experiments. Because of the low percent yields obtained throughout these experiments, it appears there was difficulty creating the desired product at times. An interesting point to note was that the percent yields did tend to increase a little bit when moving from the 10:1 to 5:1 ratios. However, going from 5:1 to 1:1 did not seem to have the same success throughot the experiments. The practical use of this research is that these experiments help develop a strategy to afford the synthesis of LMA-P2, which exhibits anti-cancer activity against HCT-116 colonic epithelial cancer cell line. Financial support for this research was made possible by an award from the Research and Creative Productions Committee and an Undergraduate Research Fellowship from Morehead State University.

Project Dissemination:

Slone, C. and VanNess, B.G. (2018, April). Enantioselective Cross Aldol Reactions of Aldehydes. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Slone, C. and VanNess, B.G. (2018, March). Enantioselective Cross Aldol Reactions of Aldehydes. 255th American Chemical Society Meeting, New Orleans, LA, March, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Accepted into the University of Tennessee College of Pharmacy.

Slone, Jenna

Major:

Biology

Faculty Mentor:

Allen C. Risk

Research/Project Title:

Bryophyte and Lichen Species Richness at Varying Canopy Positions

Project Abstract/Summary:

Does the canopy position of trees affect the biodiversity of tree epiphytes? Epiphytic organisms, such as bryophytes and lichens, are rarely represented in surveys of ecological biodiversity and are sensitive to a variety of microclimatic factors. To determine the answer to this question, two 20 m by 20 m plots were established in the Eagle Lake watershed near Morehead, Kentucky. Each plot was centered around a codominant white oak (Quercus alba). The overstory white oak and three understory trees were sampled for all bryophyte and lichen species in five meter intervals using climbing equipment. Researchers anchored their ropes in the branches of the central white oak in order to gain access to upper trunks and crowns of surrounding trees using a doubled rope technique. Samples of epiphytes were collected using wood chisels and limbs were removed with a hand saw for later examination. These samples were brought back to the lab and identified using dissecting microscopes, compound microscopes, UV tests, and chemical tests. The samples were categorized into species from understory trees and overstory trees to determine if a correlation existed between forest canopy position and epiphyte species richness and composition. We found that the greatest species richness was found among foliose lichens. The researchers found that 60% of all species that were identified were limited to understory trees. Among all epiphytic organisms, crustose lichens exhibited the most dramatic preference for understory trees, with 17 out of the 21 species that were limited to growth on understory trees.

Project Dissemination:

Oral presentation at the Celebration of Student Scholarship 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Stiles, Kristian

Major:
Biology
Faculty Mentor:
Sean O'Keefe
Research/Project Title:
Arthroshield 880: A Potential New Way to Reduce Bed Bug Infestations
Project Abstract/Summary:
Bed bugs have long been a scourge of Western Society, and their incidence has dramatically increased within the past few decades. They can not only invade homes and apartments, but are becoming increasingly found in motels, dorms, and other places of lodging. Currently, the only way to treat a bed bug infestation is through the extensive use of chemical pesticides. Arthroshield is developing a new method to treat textiles (e.g. mattress, bindings, mattress skid fabric, carpet bindings, mattress tape, etc) that, hopefully, will decrease the survivorship of bed bugs. We have been conducting preliminary trials since mid-December. Based on our preliminary trials, Arthroshield has been modifying their application procedure and we have been modifying the experimental set up in which to test new textiles. Some of our preliminary results appear to be positive. Funding for this study was provided by Dan Short and Kyle Bullock of Arthroshield.
Project Dissemination:
Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF EARTH AND SPACE SCIENCE

Brown, Kala Michelle

Major:
Geology
Faculty Mentor:
Marshall Chapman
Research/Project Title:
The Age of the Hooper Coal
Project Abstract/Summary:
The Hooper Coal in Bastrop County, Texas contains multiple ash beds, which have not been studied to date. Ash samples were collected in May 2017 and brought to MSU. This research project will utilize mechanical and chemical separation of ash components to isolate zircons for radiometric age dating. Additionally, optical characterization and geochemistry (majors, minors, REEs) will be completed to provide an ash fingerprint, which may allow it to be correlated to a volcanic source. The research will be reported at both regional (Kentucky Academy of Sciences) and national venues as part of ongoing research.
Project Dissemination:
Kala M. Brown, Eli C. Martin III, Jen O'Keefe, W. Marshall Chapman (mentor) (2018, April).Volcanic Ash in the Paleocene Hooper Formation, Wilcox Group, Texas: A Preliminary Report. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Gedenk, Tobias

Major:
Space Science
Faculty Mentor:
Benjamin Malphrus
Research/Project Title:
Mission Operations Concepts and Implementation for the JPL ASTERIA Mission, CXBN-2, and Future SmallSat Missions

Project Abstract/Summary:

Space mission operations involves a broad range of interrelated activities that encompass mission planning and analysis, flight control, training, and other actions aimed at ensuring the development and implementation of viable and effective processes designed to keep mission data and services flowing to users. The 21m Space Tracking Antenna at Morehead State University and its associated Mission Operations Center (MOC) are unique facilities capable of offering space mission operation services in support of NASA's Near Earth Network (NEN) and NASA's Deep Space Network (DSN). The 21m is currently NEN compatible and has received funding from NASA to upgrade the system to DSN compatibility. This project will involve the implementation of upgraded systems architecture to support DSN activities and the testing and operations of these systems in support of JPL's ASTERIA mission and Morehead State University's CXBN-2 mission. Processes and systems (hardware and software) will be implemented toward DSN compatibility and implementation and testing of these systems will be undertaken to ultimately support the Morehead State/NASA Lunar IceCube deep space mission.

Project Dissemination:

Oral Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

People's Choice Award, Celebration of Student Scholarship, April, 2018.

Post-Graduation Plans (Seniors only):

N/A

Hart, Chloe

Major:

Space Science

Faculty Mentor:

Benjamin Malphrus

Research/Project Title:

Ground Operations Support for the JPL ASTERIA Mission

Project Abstract/Summary:

ASTERIA (Arcsecond Space Telescope Enabling Research in Astrophysics) was deployed from the ISS on November 20, 2017. It's mission is to achieve arcsecond-level line-of-sight pointing error and highly stable focal plane temperature control. The developers of this spacecraft are part of JPL's Phaeton Program. Morehead State University's Space Science Center was contracted to provide spacecraft tracking, telemetry, and control services to the Mission Operations team at JPL. The Space Science Center's Ground Operations Team, which consists of Sarah Wilczewski, Toby Gedenk, Chloe Hart, and Alex Roberts, uses advanced technology consisting of highly sensitive RF front ends, fiber optics, SDR software, an Amergint transceiver, and MSU's own 21-Meter Space Tracking Antenna to perform these services. The team has performed over 200 passes since spacecraft deployment. ASTERIA's 90-day prime mission was successful. The spacecraft continues to operate nominally and MSU has now entered an extended contract. In this presentation the team will provide an overview of the ASTERIA mission, the mission operation processes, and the ground station Architecture.

Project Dissemination:

Oral Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

People's Choice Award, Celebration of Student Scholarship, April, 2018.

Post-Graduation Plans (Seniors only):

N/A

Mikula, Rebecca

Major:

Astrophysics

Faculty Mentor:

Dirk Grupe

Research/Project Title:

Swift and XMM-Newton Observations of the Narrow Line Seyfert 1 Galaxy Mkn 766

Project Abstract/Summary:

(Mkn766) is an extreme Narrow Line Seyfert 1 galaxy. Its black hole mass with just about 1 million solar masses is small even for a NLS1. The X-ray spectrum is rather flat for this class of objects and considering its FWHM (H-beta) the [OIII] emission is very high and the FeII emission low. We had started an intense monitoring campaign with Swift on this object in 2007 together with ground-based optical photometry. Mkn 766 has been observed by Swift since a decade with irregular intervals. Recently one of our colleagues, Alex Markowitz, suggested we should start working on this project again. Rebecca's task will be to re-analyze the Swift data. This is necessary because the calibration has changed. Her task will be to prepare the data to derive light curve to study the variability of this source. In addition, Rebecca will analyze several data set obtained by XMM to have a closer look at the spectral variability of this AGN.

Becca has made very good progress on this project. All X-ray data obtained by Swift have been extracted and analyzed. After the Summer, Becca will concentrate on the analysis of the UV and optical data and then will also look into the spectral analysis of the XMM data.

Project Dissemination:

Becca has given two talks so far on this project. The first one was given at the Kentucky Area Astronomical Society meeting at Northern Kentucky University on April 07 and the second one at the Celebration of Student Scholarship at MSU on April 25. The plan is that Becca will participate at the KAS meeting in November in Bowling Green and if possible also at the Swift meeting in Clemson in October.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Nichols, Mitchell

Major:

Physics (Astrophysics)

Faculty Mentor:

Thomas Pannuti

Research/Project Title:

A Deep Chandra X-ray Observation of Nearby Spiral Galaxy NGC 7793

Project Abstract/Summary:

Taking advantage of the Chandra X-ray Observatory's high angular resolution and moderate flux sensitivity, we have performed an investigation of the X-ray characteristics of Sculptor group Galaxy NGC 7793. This project originally began as an investigation of multiple spiral galaxies located in the Sculptor group. However, data analysis of the observations of edge-on galaxies NGC 55 and NGC 247 yielded unremarkable results. Focus was then shifted to another Sculptor group galaxy, NGC 7793. Not only does NGC 7793 have a face-on orientation (making it ideal for investigation due to minimal internal absorption effects), the total amount of available observation exposure time has gone from 48.94 kiloseconds in 2011, to 190.32 kiloseconds currently. Using this new data and our standard source detection algorithm in the CIAO software package, we have detected more than 72 X-ray sources in the observations of NGC 7793, over 50 of which are located within the optical extent of the galaxy itself. Comparing the positions of these detected sources with the locations of supernova remnants detected by optical and radio observations from previous studies of NGC 7793, we searched for positional associations between the detected discrete X-ray sources and the sources found by prior optical and radio observations. We expect that because supernova remnants produce copious amounts of radiation across a wide range of the electromagnetic spectrum, we would find significant overlap between sources detected at multiple wavelengths. In total, we found approximately five sources that appear to be detected at all three wavelength domains, including the unusual source N7793-S26. The surprising result from our study is the overwhelming lack of x-ray counterparts to optically identified supernova remnants. This result has a number of possible implications regarding NGC 7793's unique x-ray properties, and the methodology for identifying supernova remnants in nearby galaxies at different wavelengths. Our analysis of these particular sources and their multi-wavelength properties is on-going.

Project Dissemination:

Nichols, Mitchell E. and Pannuti, Thomas. (2018, April) A Deep Chandra X-ray Observation of Nearby Spiral Galaxy NGC 7793. Oral presentaton, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Norris, Sarah

Major:

Astrophysics

Faculty Mentor:

Thomas Pannuti

Research/Project Title:

Masers and Their Applications in Modern Astrophysics

Project Abstract/Summary:

Working with Professor Pannuti, Sarah analyzed a pointed observation made with the Chandra X-ray Observatory of the luminous northwestern rim of the Galactic supernova remnant W2* (also known as G6.4-0.1). This remnant is one of the brightest in the Milky Way Galaxy and is characterized by its strong interaction with adjacent molecular clouds. This interaction is manifested in part by the large number of hydroky (OH) masers detected along the boundaries between W28 with a large concentration seen along the northeastern rim of the supernova remnant. This rim is a remarkable feature of W28 in that it is the only structure of the supernova remnant that is detected at X-ray, optical and radio wavelengths: this curious feature motivated a detailed spatially-resolved spectroscopic study with Chandra. Sarah analyzed spectra extracted from fourteen different portions of the rim and fit these spectra simultaneously with several different thermal plasma models. She found that the fitted temperatures of the regions were remarkably uniform across the entire azimuth of the rim and the plasma was in the more distant past such that there has been enough time for the plasma to reach such equilibrium: this plasma sate is not often seen in the X-ray emitting plasmas associated with Galactic supernova remnants. Furthermore, Sarah's spectral analysis suggesting that the elemental abundances of the X-ray emitting plasma were sub-solar rather than super-solar: this result indicates that the X-ray emitting plasma of the rim is more likely to be swept-up material rather than stellar ejecta from the original supernova explosion. Sarah also provided a summary of her work at MIT Haystack Observatory in 2017 where she investigated the use of artificial masers for applications in modern astrophysics such as absolute position determinations.

Project Dissemination:

Publication:

Panntui, T.G., Rho, J., Allen, G.E., Pihlstrom, Y., Norris, S.E., Chen, Y., Zhang, G.Y., Zhou, P., Mahaffey, B..J. and Poulos, P.E., A Chandra Observation of the Northeastern Rim of the Galactic Supernova Remnant W28 (G6.4-0.1), 2018, submitted to Astrophysical Journal.

Oral Presentations:

Norris, S.E. and Pannuti, T.G. A Spatially-Resolved X-ray Spectroscopic Analysis of the Luminous Northeastern Rim of the Galactic Supernova Remnant W28 (G 6.4-0.1) Using the Chandra X-ray Observatory, 2018 American Astronomical Society Kentucky Area Meeting. Norhern Kentucky University, Highland Heights, KY, April, 2018.

Norris, S.E. and Pannuti, T.G. A Spatially-Resolved X-ray Spectroscopic Analysis of the Luminous Northeastern Rim of the Galactic Supernova Remnant W28 (G6.4-0.1). 13th Annual Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Palmer, Ethan

Major:

Space Science

Faculty Mentor:

Jeff Kruth

Research/Project Title:

Spacecraft Mechanical Systems Design and Fabrication

Project Abstract/Summary:

The Space Science Center at Morehead State University has become an internationally recognized center for the development of small satellite technologies. At the core of these systems are the spacecraft mechanical systems. These systems include structural systems and elements, thermal management systems, mechanical systems that support deployables (solar arrays, antennas, etc.), electrical grounding and bonding systems and others. The design of these mechanical sysems draws from a variety of disciplines including materials science, physics (statics and dynamics), chemistry, machine tooling, CAD modeling, and space science. This project involves the design and development of spacecraft-specific mechanical systems for spacecraft currently under development at Morehead State University including the NASA-funded Lunar IceCube spacecraft.

Project Dissemination:

Poster Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Schabert, Jacob

Major:

Space Science

Faculty Mentor:

Benjamin Malphrus

Research/Project Title:

Implementation of the SPICE Observation Geometry System on the Lunar IceCube Mission

Project Abstract/Summary:

In remote-sensing science missions, understanding the observational geometry of the mission is exceptionally important in achieving the science goals. Without this information, the scientists would have a set of data with no feasible method of correlating it with a physical point for future reanalysis or practical applications. To meet this requirement, NASA JPL's Navigational and Ancillary Information Facility (NAIF) has developed and supported a data system and set of tools called SPICE. SPICE is being used by Lunar IceCube as its basis for ancillary information. As a member of the Lunar IceCube team, I am supporting the development of various kernels and interpretation software for use in the analysis of science data. Lunar IceCube is a CubeSat developed by Morehead State University in partnership with NASA Goddard and JPL. It is one of the thirteen CubeSats selected to launch as a secondary payload on Exploration Mission 1, the first launch of the Space Launch System. This research was funded in part by the NASA Space Grant and the Hal Rogers Undergraduate Research Fellowship for Space Science.

Project Dissemination:

Schabert, Jacob T. (2018, April). Implementation of the SPICE Observation Geometry System on the Lunar IceCube Mission. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Stephenson, F. Maggie

Major:

Geology

Faculty Mentor:

Jen O'Keefe

Research/Project Title:

Palynology of the Manawianui Dr. Section, Bastrop County, Texas

Project Abstract/Summary:

We are studying the pollen and fungal forms present in Wilcox and Claiborne Group exposure located in a vacant lot at the end of Manawianui Dr. in Bastrop county, Texas. This exposure consists of the upper Sabinetown Formation, "dark Band" that is cut out by several annealed channels, at least two of which have subbituminous coal as the final channel fill, and the Carrizo Formation. After examining the lithostratigraphy and the data collected from the samples taken from the exposure there is evidence of numerous changes in depositional environment, consistent with small-scale transgressions and regressions at the time the sediments were deposited. Our first goal was to describe the ecosystems present at the time of deposition. We found that the sediments were deposited in a series of environments that included shallow-shelf (offshore), tidal flats, mangrove swamps, hardwood hammocks (dry regions within an Everglades-like swamp environment), and palm-dominated savannahs. Another goal for the project is to determine if the Paleocene-Eocene Thermal Maximum (PETM) is expressed at this site. The PETM is important because it is the boundary between the Paleocene & Eocene epochs, and was marked by a rise in sea level due to extreme global warming. We are still in the process of collecting data to meet this goal, but preliminary data suggests it is likely that it is expressed near the base of the section.

Project Dissemination:

Stephenson, M., O'Keefe, J., Demchuk, T., & Denison, C. (2018, April). Tidal Flats and Palm Savannahs in Texas: Palynology of the Paleocene-Eocene Manawianui Drive Section, Bastrop County, TX. Poster presentation, Celebration of Student Scholarship. Morehead State University, Morehead, KY, April, 2018.

O'Keefe, J., Brooke, S., Gardner, K., Stephenson, M., Killen, A., & Nunez Otano, N., (2018, March). Wilcox Group Fungal Communities and Implications for Depositional Environments. Oral presentation, Baylor University Department of Geology Seminar. Waco, TX.

Gardner, K., Stephenson, M., O'Keefe, J., Demchuk, T., & Denison, C. (2018, March). Wetlands in Palm Savannahs: Palynology and Organic Petrography of Channel-Fill Coals in the Uppermost Wilcox Group, Texas. Oral presentation, 2018 Meeting of the Ohio Valley Organic Petrographers. Morehead, KY.

Planned poster presentation for Fall 2018 Geological Society of America: Stephenson, M., O'Keefe, J., Nunez, Otano, N., Demchuk, T., & Denison, C. (2018, November). Tidal Flats and Palm Savannahs in Texas: Palynology of the Paleocene-Eocene Manawianui Drive ection, Bastrop County, TX.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF KINESIOLOGY, HEALTH AND IMAGING SCIENCES

Coleman, Kayly

Major:

Pre-Therapy

Faculty Mentor:

Gina Gonzalez/Manuel Probst

Research/Project Title:

EMG Analysis of Exaggerated Hip Rotation on Anaerobic Power during Spring Cycling

Project Abstract/Summary:

The purpose of the pilot test was to determine if the addition of hip rotation can affect lower body anaerobic power during sprint cycling and to test methods for a larger study. Four (n = 4) untrained subjects performed a Wingate Anaerobic Test for 30 seconds using standard cycling technique (ST) on one day and on another day, subects switched to hip rotation (RT) for the final 15 seconds. Subjects were fitted with electrodes, which were used to analyze electromyography (EMG) data. EMG data was collected and analyzed using Biopac MP36 Systems. Mean anaerobic power, fatigue index, peak power and minimum power were analyzed with SMI Power software. EMG data was analyzed between ST and RT at the four locations of electrode placements. The EMG data appeared to show differences in muscle activity that could be related to differences in muscle activation requirement between the RT and ST tests.

Project Dissemination:

Coleman, Kayla A., Dixon, B.C., Gonzalez, G.B., Probst, M.M. (2018, April). EMG Analysis of Exaggerated Hip Rotation on Anaerobic Power During Spring Cycling. Celebration of Student Scholarship. Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF MATHEMATICS AND PHYSICS

Anderson, Jessy

Major:

Physics/Math

Faculty Mentor:

Jennifer Birriel

Research/Project Title:

Participating in the Citizen CATE Project and Looking at the Suns Inner Corona

Project Abstract/Summary:

Total solar eclipses provide data that are not accessible even to space-based coronagraphs. Viewed at any single location total solar eclipses are brief events, lasting less than 7 minutes in most cases. On August 21, 2017, a team of physic professors and students from MSU collected data as a part of the Continental-America Telescopic Eclipse (i.e. Citizen CATE) project. We were assigned a site located in Hopkinsville, Kentucky. We obtained just over 2 minutes of high resolution data. We looked to see if there was any change in the inner corona in our two minutes of data. Although we detected no changes. We report our measurements of the physical size of the sun, the inner and outer corona, solar flares and other interesting phenomenon. This work was supported by an MSU Undergraduate Research Fellowship.

Project Dissemination:

Jessy Anderson, Ethan Caudill, Dr. Jennifer Birriel, Mentor (2018, April). Morehead State University and Citizen CATE: A High Definition Look at the Sun's Inner Corona During the 2017 Solar Eclipse over Hopkinsville, Kentucky. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Blackburn, James M.

Major:

Computational Physics

Faculty Mentor:

Jennifer Birriel

Research/Project Title:

Monitoring Night Sky Brightness in the Morehead, KY Area using Sky Quality Meters

Project Abstract/Summary:

Light pollution is a pervasive form of pollution due to excess artificial lighting of the night. It represents an economic and ecological problem that can be solved with relative ease. First, however, we must quantitatively document night-sky brightness and compare it to natural levels of night sky brightness. This project represents the second stage of a documenting of night-sky brightness in the Rowan County area: this includes the city of Morehead, Cave Run Lake, and parts of the surrounding Daniel Boone National Forest. Unihedron Sky Quality Meters are used to perform photometric measurements of brightness. The charged-couple device (CCD) collects photons of light and the device converts this energy flux to an astronomical magnitude by using the known brightness of the standard star Vega which has a magnitude of 0.0. We also examine the spectral output and the effect of the spectral signature of night-time lighting on the color of the night sky.

Project Dissemination:

The student presented a talk at the Celebration of Student Scholarship on Morehead State University's campus, April 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

The student will complete his coursework at Morehead State University this summer and is looking for a job in engineering or physics upon graduation.

Caudill, Ethan

Major:

Physics/Math

Faculty Mentor:

Jennifer Birriel

Research/Project Title:

Participating in the Citizen CATE Project and Looking at the Suns Inner Corona

Project Abstract/Summary:

Total solar eclipses provide data that are not accessible even to space-based coronagraphs. Viewed at any single location total solar eclipses are brief events, lasting less than 7 minutes in most cases. On august 21, 2017, a team of physic professors and students from SMU collected data as a part of the Continental-America Telescopic Eclipse (i.e. Citizen CATE) project. We were assigned a site located in Hopkinsville, Kentucky. We obtained just over 2 minutes of high resolution data. We looked to see if there was any change in the inner corona in our two minutes of data. Although we detected no changes. We report our measurements of the physical size of the sun, the inner and outer corona, solar flares and other interesting phenomenon. This work was supported by an MSU Undergraduate Research Fellowship.

Project Dissemination:

Jessy Anderson, Ethan Caudill, Dr. Jennifer Birriel, Mentor (2018, April). Morehead State University and Citizen CATE: A High Definition Look at the Sun's Inner Corona During the 2017 Solar Eclipse Over Hopkinsville, Kentucky. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY,April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Hankins, James L.

Major:

Physics

Faculty Mentor:

Jennifer Birriel

Research/Project Title:

Morehead State University's Collection of Vintage Physics Equipment

Project Abstract/Summary:

The preservation of antique and vintage instrumentation is a common practice across all disciplines. Such items are found in museum, universities and personal collections. Morehead State University started as Morehead Normal School in the 1930s so it is not surprising that a small variety of vintage physics equipment exists on campus. We collected physics equipment from labs and storage areas and set about the task of identifying each piece. Identification methods included internet searches, professional assistance, and company consultation. We have since established a display of this vintage equipment in the public "museum" area of Lappin Hall. This research was supported by the MSU undergraduate research fellowship.

Project Dissemination:

Hankins, James L. (2018, April). Morehead State University's Collection of Vintage Physics Equipment., Lecture. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Hankins, James L. (2018). Morehead State University's Collection of Vintage Physics Equipment. Lecture, Kentucky Association of Physics Teachers, Huntington, WV, 2018.

A permanent display of our best vintage physics equipment is now located in the museum on the ground floor of Lappin Hall.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF PSYCHOLOGY

Cantrell, Alexandria

Major:

Neuroscience

Faculty Mentor:

Ilsun White/Wesley White

Research/Project Title:

Dopamine-cholinergic Interaction: Animal Model of Alzheimer's Disease

Project Abstract/Summary:
This project was to examine dopamine-cholinergic Interaction in learning. Due to a short 3-week research duration, activity data analysis was done using amphetamine-related activity change.

Project Dissemination:
Case SK. (2018, February). A Potential Animal Model of Drug Vulnerability. Poster Presentation, Posters-at-the-Capitol, Frankfort, KY. Febraury 2018.

Bennett AL, Cantrell AB, Everman KL, Carter GK, White W. (2018, April). Correlation Among Potential Measures of Drug Vulnerability in Rats. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY. April, 2018.

Awards and/or Honors:
Outstanding Neuroscience Senior Award.

Post-Graduation Plans (Seniors only):
Doctoral program in physical therapy (DPT).

Case, Samuel

Major:
Psychology

Faculty Mentor:
Ilsun White/Wesley White

Research/Project Title:
Effect of Alcohol and Nicotine on Learning and Activity in Rat

Project Abstract/Summary:
This project was to examine the effects of alcohol and nicotine on learning. This student withdrew from the URF.

Project Dissemination:
Posters-at-the-Capitol, February 2018.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Collins, Elizabeth

Major:
Neuroscience

Faculty Mentor:
Ilsun White

Research/Project Title:
Reversibility of Scopolamine-Induced Cognitive Deficits by Glutamatergic Agents

Project Abstract/Summary:
This project was to examine the reversibility of memory deficits induced by glutamatergic antagonist, using cholinergic ligands. Through systematic examination of interaction between NMDA-receptor ligand and cholingergic antagonists was to be examined. However, due to a short duration of research, testing was limited to examination of reversibility of MK801-induced deficits with dopamine agent was examined in learning and memory.

Project Dissemination:
Elizabeth's 3-week of URF earlier this semester is included in a co-authored abstract for the Society of Neuroscience 2018.

Her 3-semester volunteer, prior to URF yielded:

Collins EA, Case SL, Ward BK, White IM (November, 2017). MK-801, a NMDA Antagonist, Reverses Scopolamine-Induced Behavioral Deficits. Kentucky Academy of Science (KAS), Murray State University, Murray, KY, November, 2017.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
A graduate program in a field of neuroscience.

Crowe, Jorden

Major:

Psychology

Faculty Mentor:

Greg Corso

Research/Project Title:

Assessment of Attention Deficit Disorder

Project Abstract/Summary:

This project investigated several traditional instruments used to assess Attention Deficit Disorder, including the Test of Variables of Attention (TOVA) and the Continuous Performance Task (CPT). In conjunction with these assessment instruments, we used a binary classification task that has been used to investigate the locus of certain cognitive processed. Our assessment has supported the notion that ADD is involved with deficits in Iconic or Sensory memory especially those processes used to encode information.

Project Dissemination:

Lush, E., Crowe, J., Jones, V., & Corso, G.M. (2018, April). Comparing Scores: Test of Variables of Attention and Continuous Performance. Poster presentation at Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Crowe, J., Lush, E., Jones, V., & Corso, G.M. (2018, April). An Investigation of the Origins of Attention Deficit Disorders. Poster presented at Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Crowe, J., Lush, E., Jones, V., & Corso, G.M. (2018, March). Identifying the Locus of Attention Deficit Disorders. Poster, Southeastern Psychological Association. Charleston, SC, March, 2018.

Lush, E., Crowe, J., Jones, V., & Corso, G.M. (2018, March). Comparing Scores: Test of Variables of Attention and Continuous Performance. Poster, Southeastern Psychological Association, Charleston, SC, March, 2018.

Lush, E., Crowe, J., Jones, V., & Corso, G.M. (2018, April). Comparing Scores: Test of Variables of Attention and Continuous Performance. Carolinas Psychology Conference, Campbell University, Buies Creek, NC, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Felts, Camille

Major:

Psychology

Faculty Mentor:

Tim Thornberry

Research/Project Title:

Examining Parent Smoking, Trauma, Reactivity, and Observed Parent-Child Interactions

Project Abstract/Summary:

Camille's project examines the associations between parent smoking, trauma-related symptoms, and behaviors observed during a standardized behavior observation. In addition, this project expands on previous pilot data of a novel Reactivity Questionnaire by documenting reactivity in two parent populations – smokers and those with high levels of self-reported trauma-related symptoms. Camille co-authored a poster and presented the result of her study at the Celebration of Student Scholarship; she explored relationships between family SES and observed child negative behaviors. In addition, Camille was trained on our behavioral coding system and assisted with data entry.

Project Dissemination:

Turner, M., Felts, C., & Thornberry, T. (2018, April). Socio-economic Status Effects on Negative Child Behavior. Poster presented at the 2018 Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Hamm, Ashley

Major:

Psychology

Faculty Mentor:

Shari Kidwell

Research/Project Title:

Childhood Trauma and Very Insecure Attachment: Can Intervention Break the Intergenerational Cycle of Risk for Insensitive Parenting?

Project Abstract/Summary:

Childhood trauma can have a major deleterious impact on individuals, and data is accumulating that suggests this likely creates risk for future offspring. Specifically, parents with higher exposure to childhood trauma have been found to have increased likelihood of frightened, frightening, and dissociated behavior in interactions with their children, as well greater child protection involvement (Lieberman, 2007; Schechter, 2007). Increased sensitivity to infant emotional cues, in contrast, may decrease the likelihood of transmitting intergenerational risk. In this pilot study, three expectant/new mothers were given a series of questionnaires, two being specific to trauma: the PTSD Checklist (Weathers et al., 2013) and Adverse Childhood Experiences (ACEs: CDC and Kaiser-Permanente, 1995). These mothers were referred by their nurse midwife for early intervention services. The quality of dyadic synchronous interaction, the mothers' sensitivity to her baby, and the baby's cooperativeness during play was evaluated using the CARE-Index (Crittenden, 1981). Babies ranged between 6 weeks and 4 months. The pre-intervention assessment data supported the hypothesis that mothers' current PTSD symptoms and history of ACES exposure were associated with sensitivity in the Care Index. That is, mother's elevated trauma symptoms and exposure appeared to be meaningfully related to their reduced, at-risk levels of sensitivity with their infants.

For Ashley's final semester as a URF, our focus has been on post-intervention assessment. The intensive parenting phase of the intervention consisted of 10 weeks of Attachment and Biobehavioral Catch-Up (Dozier & University of Delaware Infant-Caregiver Lab, 2012). At the conclusion of these sessions, the CARE Index was repeated, as well as an insightfulness intervew and the PTSD measure. The infant's attachment security is being assessed at present. Ashley has been involved with each of these efforts, but her specialty has been coding parental sensitivity and child attachment. Consistent with our hypothesis, pre-intervention caregiving sensitivity and insightfulness were predictive of level of change amongst our dyads. One mother had considerable increase in sensitivity but less increase in insightfulness, whereas one mother had the reverse pattern. The third mother had very modest positive gains in both. This latter mother had the most pervasive exposure to and most complex response to trauma, which may be what limited her progress. These data are very intriguing and should prove publishable because of the comprehensive nature of assessment, as well as the critical need for effective interventions for caregivers who have experienced trauma.

Project Dissemination:

Hamm, Ashley N., Raymer, Madison V., Kidwell, Shari L., and Meritt, Frances. (2017, November). Maternal Trauma and Parenting Sensitivity: Implications for Attachment-Based Parenting Interventions. Poster presentation, Kentucky Academy of Science, Murray, KY.

Kidwell, Shari L., Hamm, Ashley N., Raymer, Madison V., and Meritt, Frances (2017, May). Insecure Attachment, Trauma, and Parenting Sensitivity: Intergenerational Implications for Early Intervention. Poster presentation, Appalachian Research Day, Hazard, KY.

Awards and/or Honors:

Ashley earned a Certificate of Exceptional Merit at the Morehead State University's Celebration of Student Scholarship for two of the three years in which she competed as a Undergraduate Research Fellow.

Post-Graduation Plans (Seniors only):

Ashley will be attending the Clinical Psychology MS Program at Morehead State University in fall 2018.

Lush, Emily

Major:

Psychology

Faculty Mentor:

Gregory Corso

Research/Project Title:

Assessment of Attention Deficit Disorder

Project Abstract/Summary:

This project investigated several traditional instruments used to assess Attention Deficit Disorder, including the Test of Variables of Attention (TOVA) and the Continuous Performance Task (CPT). In conjunction with these assessment instruments, we used a binary classification task that has been used to investigate the locus of certain cognitive processed. Our assessment has supported the notion that ADD is involved with deficits in Iconic or Sensory memory especially those processes used to encode information.

Project Dissemination:

Lush, E., Crowe, J., Jones, V., & Corso, G.M. (2018, April). Comparing Scores: Test of Variables of Attention and Continuous Performance. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Crowe, J., Lush, E., Jones, V., & Corso, G.M. (2018, April). An Investigation of the Origins of Attention Deficit Disorders. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Crowe, J., Lush, E., Jones, V., & Corso, G.M. (2018, March). Comparing Scores: Test of Variables of Attention and Continuous Performance. Poster presentation, Southeastern Psychological Association, Charleston, SC, March, 2018..

Lush, E., Crowe, J., Jones, V., & Corso, G.M. (2018, April). Comparing Scores: Test of Variables of Attention and Continuous Performance. Oral presentation, Carolinas Psychology Conference, Campbell University, Buies Creek, NC, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Morris, Mark

Major:

Psychology

Faculty Mentor:

Gregory Corso

Research/Project Title:

Dual Task Methods and ADD

Project Abstract/Summary:

This project investigated the locus of Attention Deficit disorder. Participants were required to take several standarad ADD assessment instruments as well as several standardized experimental psychology tasks. One of these tasks was a dual task. The dual task performance did not appear to be reflected in any of the traditional tasks used to assess ADD. The project was modified to look at various aspects of the dual task, including input devices.

Project Dissemination:

Morris, M., Jones, V., Prince, S., & Corso, G.M. (2018, April). Mouse or Touch Screen, Which One Whacks a Better Mole? Oral presentation, Carolina Psychology Conference. Campbell University, Buies Creek, NC, April, 2018.

Jones, V., Morris, M., Prince, S., & Corso, G.M. (2018, April). Can a Dual Task Video Game be an Effective Assessment of Attention? Oral presentation, Carolina Psychology Conference, Campbell University, Buies Creek, NC, April, 2018.

Morris, M., Jones, V., Prince, S., & Corso, G.M. (2018, April). Mouse or Touch Screen, Which One Whacks a Better Mole? Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Jones, V., Morris, M., Prince, S., & Corso, G. (2018, April). Can a Dual Task Video Game be an Effective Assessment of Attention? Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Prince, S., Morris, M., Jones, V., & Corso, G.M. (2018, April). Task Attentiveness and ADHD Diagnostic Measures. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Morris,M., Jones, V., Prince, S., & Corso, G.M. (2018, April). How Many Moles Can You Whack: An Analysis of Dual Task Performance using ROC Curves? Poster presentation, Southeastern Human Factors and Applied Research Conference Annual Meeting, Clemson University, Clemson, SC, April, 2018.

Jones, V., Morris, M., Prince, S., & Corso, G.M. (2018, April). Can a Dual Task Video Game be an Effective Assessment of Attention? Poster presentation, Southeastern Human Factors and Applied Research Conference Annual Meeting, Clemson University, Clemson, SC, April, 2018.

Awards and/or Honors:

Mark's poster won an exceptional merit award at the 2017-2018 Celebration of Student Scholarship.

Post-Graduation Plans (Seniors only):

Will be attending graduate school – University of Houston, Clear Lake, in the Applied Cognitive Program.

Raymer, Madison

Major:

Psychology

Faculty Mentor:

Shari Kidwell

Research/Project Title:

Can Intervention Change How Parents Interpret the Meeting of Their Child's Behavior?

Project Abstract/Summary:

Research has demonstrated that mother's ability to think insightfully about themselves and their babies are associated with a wide range of child psychosocial outcomes. Although several measures have been utilized to assess insightfulness, most utilize detailed structured interviews. The Working Model of the Child Interview (WMCI: Zeanah et al., 1994) used in the current study, has been associated with infant attachment, dyadic interactional quality, and maternal mental health. The WMCI explores the "meaning" a baby has to his or her parent by asking about perceptions of the relationship, the child, and parenting experiences. In this pilot study, the WMCI was administered to three expectant/new mothers' to assess mental representations of their babies. These mothers were referred by their nurse midwife for early intervention services. The quality of dyadic synchronous interaction, the mothers' sensitivity to her baby, and the baby's cooperativeness during play was evaluated using the CARE-Index (Crittenden, 1981). Babies ranged between 6 weeks and 4 months. The pre-intervention data supported the hypothesis that mothers that were rated as non-insightful on the WMCI had reduced, at-risk levels of sensitivity with their infants.

Madison's senior year URF involved post-intervention assessment. The intensive parenting phase of the intervention consisted of 10 weeks of Attachment and Biobehavioral Catch-Up (Dozier & University of Delaware Infant-Caregiver Lab, 2012). At the conclusion of these sessions, the CARE Index and the WMCI were re-administered. Infant's attachment security is currently being evaluated. Madison was primarily involved with coding the Working Model of the Child Interview. Consistent with our hypothesis, pre-intervention caregiving sensitivity and insightfulness were predictive of level of change amongst our dyads. One mother had the reverse pattern. The third mother had very modest positive gains in both. These data are very intriguing and should prove publishable because of the comprehensive nature of assessment, as well as the critical need for effective interventions for caregivers of young children.

Project Dissemination:

Raymer, Madison V., Conn, Megan L., Osborne, Kaitlyn, Kidwell, Shari L., and Meritt, Frances. (2018, April). Changes in Maternal Insight During an Attachment-Based Dyadic Intervention, Poster presentation, Celebration of Student Scholarship, Morehead, KY, April, 2018.

Raymer, Madison V., Conn, Megan L,. Kidwell, Shari L., and Meritt, Frances. (2017, November). Maternal Reflective Functioning and Dyadic Synchrony. Poster presentation, Kentucky Academy of Science, Murray, KY, November, 2017.

Kidwell, Shari L., Hamm, Ashley N., Raymer, Madison V., and Meritt, Frances (2017, May). Insecure Attachment, Trauma, and Parenting Sensitivity: Intergenerational Implications for Early Intervention. Poster presentation, Appalachian Research Day, Hazard, KY, May, 2017.

Awards and/or Honors:

In 2018, Madison received the Graduate Dean Scholar Award.

Post-Graduation Plans (Seniors only):

Madison plans to further her education by attending a program in early childhood intervention or elementary education. She plans to continue working with children in daycare, education, or treatment settings.

Turner, Madison

Major:

Psychology

Faculty Mentor:

Tim Thornberry

Research/Project Title:

Examining Parent Smoking, Trauma, Reactivity, and Observed Parent-Child Interactions/Gateway Wellness Coalition Pediatric Obesity Initiative

Project Abstract/Summary:

Madison was involved in several lab projects this semester. This first project examines the associations between parent smoking, trauma-related symptoms, and behaviors observed during a standardized behavior observation. In addition, this project expands on previous pilot data of a novel Reactivity Questionnaire by documenting reactivity in two parent populations – smokers and those with high levels of self-reported trauma-related symptoms. Madison presented the results of her study at the Celebration of Student Scholarship; she explored relationships between family SES and observed child negative behaviors.

Data collection for the second project is ongoing. Madison received training in assisting with conducting focus groups to assess community perceptions of pediatric obesity in the region. She assisted in reviewing the project IRB and is now assisting with data collection and analysis.

Project Dissemination:

Turner, M., Felts, C., & Thornberry, T. (2018, April). Socio-economic Status Effects on Negative Child Behavior. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Ward, Brianna

Major:

Psychology

Faculty Mentor:

Ilsun White

Research/Project Title:

This project examined reversibility of memory deficits induced by cholinergic antagonist. We examined the effects of cholinergic agonist, nicotine, on scopolamine-induced deficits during simple learning tasks. Consistent with our previous reports, scopolamine reliably impaired behavior during learning tasks. Nicotine partially reversed scopolamine-induced impairment, suggesting that there is functional interaction between two cholinergic receptor subtypes. A further study is warranted.

Project Abstract/Summary:

Brianna's URF for 3-consecutive semesters, Fall 2016 – December 2017, yielded the following outcomes:

Ward BK, Collins EA, White W, White IM (November, 2017). Can Nicotine Improve Scopolamine-Induced Behavioral Deficit? Kentucky Academy of Science (KAS), Murray State University, Murray, KY, November, 2017. Second Place in Undergraduate Poster Competition, Psychology Category.

Case SL, Riggs TE, Ward BK, White IM, White W (April 2017). A Comparison of Acute Withdrawal from Amphetamine, Morphine, and Nicotine in Rats. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2017.

Collins EA, Case SL, Ward BK, White IM (November, 2017). MK-801, A NMDA Antagonist, Reverses Scopolamine-Induced Behavioral Deficits. Kentucky Academy of Science (KAS), Murray State University, Murray, KY, November, 2017.

White IM, Ward BK, Case SL, White W. PDE-4 Inhibitor, Rolipram Partially Reverses Scopolamine-Induced Behavioral Deficits. Society for Neuroscience Abstract, 329.23, 2017.

Brianna K. Ward, Samuel L. Case, Terra E. Riggs, Ilsun M. White, Wesley White (April, 2017). Flavor Conditioning Before and During Acute Withdrawal from Amphetamine Rats. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2017.

Jason McClurg, Brianna Ward, Chris Hobert, Rachel Hudson (April 2017). Withdrawal from Chronic Morphine Impairs Learning and Motivation. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2017.

Samuel L. Case, Terra E. Riggs, Brianna K. Ward, Ilsun M. White, Wesley White (April, 2017). A Comparison of Acute Withdrawal from Amphetamine, Morphine, and Nicotine in Rats. Oral presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2017.

Terra E. Riggs, Samuel L. Case, Brianna K. Ward, Ilsun M. White, Wesley White (March 2017). Acute Withdrawal from Nicotine Involves Reduced Activity and May be Due to Temporary Disruption of a Brain Reward Pathway. Poster presentation, Posters at the Capital, Frankfort, KY, March, 2017.

Brianna K. Ward, Samuel L. Case, Tesla M. Henderson, Ilsun M. White, Wesley White (November 2016). A Method for Assessing the Capacity of Amphetamine to Produce an Acute-Withdrawal Related Negative State in Rats. Poster presentation, Kentucky Academy of Science Annual Meeting 2016, Louisville, KY, November, 2016.

Terra E. Riggs, Brianna K. Ward, Samuel L. Case, Ilsun M. White, Wesley White (April 2017). Some characteristics of Acute Withdrawal from Nicotine in Rats. Poster presentation, Celebration of Student Scholarship. Morehead State University, Morehead, KY, April, 2017.

Samuel L. Case, Terra E. Riggs, Brianna K. Ward, Ilsun M. White, Wesley White (November 2016). Nicotine May Produce an Acute-Withdrawal Related Longer-Term Reduction in Activity through a Dopaminergic Pathway in Rats. Poster presentation, at the Kentucky Academy of Science Annual Meeting, Louisville, KY, November, 2016.

Project Dissemination:

Turner, M., Felts, C., & Thornberry, T. (2018, April).Socio-economic Status Effects on Negative Child Behavior. Poster presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April, 2018.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Wilson, Kaitlyn

Major:

Psychology

Faculty Mentor:

Tim Thornberry

Research/Project Title:

Examining Parent Smoking, Trauma, Reactivity, and Observed Parent-Child Interactions
Community Perceptions of Pediatric Obesity in Eastern Kentucky

Project Abstract/Summary:

The first project examines the associations between parent smoking, trauma-related symptoms, and behaviors observed during a standardized behavior observation. In addition, this project expands on previous pilot data of a novel Reactivity Questionnaire by documenting reactivity in two parent populations – smokers and those with high levels of self-reported trauma-related symptoms. Data analysis is ongoing, but preliminary results suggest behavioral differences on average between parents who smoke versus those who do not smoke.

The second project investigates community members' perceptions, attitudes, and opinions of pediatric obesity. We will assess overall understanding of pediatric obesity in the region, attitudes towards the potential development of a multidisciplinary pediatric obesity clinic, and factors that may impact the utilization of the specialty clinic for community members. Focus groups will be formed in three rural, eastern Kentucky counties in order to address community perceptions of pediatric obesity in the region. Participants will be recruited across three focus groups via flyers placed at primary clinics and a county middle school. Focus group sessions will be recorded and transcribed for independent content analysis. We hypothesize that community members will have a depth of knowledge about pediatric obesity in the region, but may not receive as much information as necessary from medical professionals, or share information on pediatric obesity with their children. We also hypothesize that community members would be interested in the development of a multidisciplinary pediatric obesity, but may not take their children to the clinic due to a variety of factors such as stigma, lack of communication between parent and child, lack of access to the clinic, lack of health insurance or other monetary issues, etc. Content will be analyzed for thematic trends regarding pediatric obesity within the focus group discussions. Our results will provide community input on current perceptions of pediatric obesity in this high-risk region, how pediatric obesity should be addressed in eastern Kentucky, and necessary resources that can help decrease the prevalence of childhood obesity.

Project Dissemination:

(1) Manuscripts are currently in progress.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Employment at a fitness center in California.

Student Index

Adkins, Henry C. 21
Anwar, Amina 43
Anderson, Brenton 4
Anderson, Jessy 58
Aronhalt, Mallory 36
Baldridge, Garrett 9
Ball, Joseph C. 36
Bennett, Sydney N. 1
Blackburn, James M. 59
Blanton, Sydney 43
Blevins, Aaron 28
Bosley, Briana 39
Bowling, Jonathan 5
Boyd, Hayley 34
Branham, Hunter 1
Branham, Kathryn 44
Brown, Kala M. 53
Bryer, Brandon 21
Burke, Stephen 37
Buschman, Sarah M. 22
Cantrell, Alexandria 60
Case, Samuel 61
Caudill, Ethan 59
Coleman, Kayly 58
Collins, Elizabeth 61
Conley, Hannah 44
Cooper, Matthew 22
Cottrell, Brianna 34
Crowe, Jorden 62
Curtsinger, Thomas A. 2
Dale, Jesseca 45
Davidson, James M. 9
Davis, Logan 45
Day, Hannah 16
Dean, Jonathan 23
DeBurger, Katherine 46
Donahue, Brooke 17
Duff, Nicole 10
Edlin, Michael T. 5
Elswick, Justin 37
Emery, Audrey 40
Eskridge, Jessie 46
Felts, Camille 62
Fink, Sarah 2
Finley, Joseph B. 17
Flanagan, Maggie 10, 11
Gedenk, Tobias 53
Gibson, Cassie 28
Gibson, Danielle 47
Good, Patrick 6
Green, Lyndsey 47
Greenwell, Kansas 11
Guerin, Abbey 32
Hall, T. Andrew 29
Hamm, Ashley 63
Hankins, James L. 60

Hansford, Amanda 6
Hart, Chloe 54
Heineman, Madeline 23
Hensley, Christian S. 3
Hereford, Elizabeth G. 48
Hezseltine, Matthew 23
Holmes, Alexandra 18
Howard,Cecelia 48
Johnson, Emily 12
Johnson, Miranda 29
Jones, Michala 24
Kabzinski, Lydia 29
Keyser, Melissa 30
Kiefer, Madelynn 49
Kilgallin, Frank 41
Knox, Anna 49
Lacey, Ravyn 24
Laskovtsov, Albina 32
Lindsey, Brandon 33
Little, Thomas 25
Lunsford, Sarah 12
Lush, Emily 63
McMillin, Taelor 50
Mikula, Rebecca 54
Milantoni, Silvia 18
Moore, Courtney 41
Morris, Mark 64
Mullins, Caitlyn 35
Muse, Savannah 13
Nichols, Mitchell 55
Norris, Sarah 56
Osborn, Kaitlyn 30
Pace, Bethany 13
Palmer, Ethan 56
Peca, Carley 4
Perkins III, Patrick C. 7
Pollitt, Maggie 50
Potts, Alexa 19
Potts, Karly 19
Preston, Shelby 35
Prowant, Max 25
Pruitt, Dustyn A. 14
Purdum, Kelsey L. 38
Quillen, Alexandra 26
Raymer, Madison 65
Razor, William 7
Rhoden, Kaitlyn 14
Robinson, Miranda 51
Rusnak, Kalee 51
Schabert, Jacob 57
Shaffer, Justin S. 15
Sharma, Binamrata 8
Siefert, Dillon 42
Slone, Chase Christopher Clark 51
Slone, Jenna 52
Stachler, Madison 15
Stamm, Mason 33
Steele, Lucy 16
Stephenson, F. Maggie 57

Stiles, Kristian 53
Syck, Taryn. 20
Syck, Tyler 26
Turner, Madison 65
Vanagen, Lars 39
VanHoose, Justin 8
VonMann, Elizabeth 27
Wallace, Madison 20
Ward, Brianna 66
Wilson, Kaitlyn 67
Wood, Austin 31