2018 Annual Meeting Program November 2-3, 2018

Western Kentucky University

Thank you to our Platinum Sponsor

ASRC
AMERICAN SYNTHETIC RUBBER COMPANY
Thank you to our Gold Sponsor

Thank you to our Morning Break Sponsor

UNIVERSITY OF LOUISVILLE
SCHOOL OF INTERDISCIPLINARY & GRADUATE STUDIES

Thank you to our Afternoon Break Sponsor
Thank you to our Bronze Sponsor

ECMBiosciences

Thank you to our In-Kind partners

WKU Office of Research and Creative Activity

Thank you our Local Arrangements Team at WKU:
Ryanne Gregory, Leslie North, Cheryl Davis, Claire Rinehart, Kerrie McDaniel, Richard Gelderman and Rodney King.

Online Program, 2018

Poster presentations are Friday from 3-6 pm and Posters will all remain in place through Saturday.

Oral Presentations are Friday from 1:15-3 pm and Saturday 8am-4pm

Thursday, November 1, 2018  6:30pm - 9:00pm

KAS Science Film Festival
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick off the KAS Meeting with a Science-themed mini-film festival,</td>
<td>Friday, November 2, 2018</td>
<td>9:00am - 11:00am</td>
</tr>
<tr>
<td>complete with popcorn! We've collected a few favorites, including</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science in Exile; Short films will change the way you see slime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>molds, bats, and the mighty coelacanth!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAS Governing Board Meeting</td>
<td>Friday, November 2, 2018</td>
<td>9:30am - 11:30am</td>
</tr>
<tr>
<td>Kentucky Organization of Field Stations meeting</td>
<td>Friday, November 2, 2018</td>
<td>11:30am - 5:00pm</td>
</tr>
<tr>
<td>Registration Open</td>
<td>Friday, November 2, 2018</td>
<td>12:00pm - 2:30pm</td>
</tr>
<tr>
<td>Poster Presenters check-in</td>
<td>Friday, November 2, 2018</td>
<td>12:00pm - 1:00pm</td>
</tr>
<tr>
<td>Science Policy &amp; Advocacy workshop</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What do scientists need to know about public policy? Do you want to advocate for science but aren't sure how to start? This workshop is for everyone – students and faculty - regardless of discipline, who are interested in learning more about the role of science in policy-making and in becoming empowered to be a voice for science. Our colleagues at the American Society for Biochemistry and Molecular Biology will provide practical guidance on how to engage in advocacy initiatives at local, state and national levels.

This event is FULL.

Featured Speakers:
Kentucky and Chair, Public Affairs Advisory Committee, American Society of Biochemistry and Molecular Biology

Dr. Matthew Gentry received his B.S. from the University of Evansville in 1996. He then studied yeast cell cycle regulation via protein phosphatase 2A at Syracuse University in Dr. Richard Hallberg’s lab, receiving his Ph.D. in 2003. He was a postdoctoral fellow at UC-San Diego with Dr. Jack Dixon where he discovered glycogen and starch phosphatases and how they are integral for both human and plant energy metabolism.

He began his independent career in 2008 and he is currently a Professor in the College of Medicine at the University of Kentucky where he oversees projects on both Lafora disease and biofuels research. The lab focuses on the regulation of specific phosphatases and E3 ubiquitin ligases in both human glycogen and plant starch metabolism utilizing in vitro biochemical and structural techniques; in situ cell culture models; and in vivo mouse, algal and plant models. Dr. Gentry has been continuously funded by NINDS since 2006, he is an NIH K99/R00 Pathway to Independence Award recipient, he received the NIH Young Investigator IDEAS Maciag Award, the 2018 NINDS Landis Award, he is an NSF CAREER awardee, and PI of both a NINDS R01 and P01. He is a Journal of Biological Chemistry Editorial Board member, Director of the NIH-funded Lafora Epilepsy Cure Initiative, and Chair of the ASBMB Public Action Advisory Committee (PAAC).

Dr. Trent Garrison, Assistant Professor, Environmental Geoscience, Northern Kentucky University, and Co-Chair, Education and Advocacy Committee, Kentucky Academy of Science

Dr. Trent Garrison grew up in Hyden, Kentucky where he attended Leslie County High School. With an interest in science, he later went on to attend Eastern Kentucky University (BS and MS in hydrogeology), Kentucky State University (Public Administration), and then University of Kentucky (PhD – Environmental Geology). Dr. Garrison is now an Assistant Professor of Environmental Geoscience at Northern Kentucky University, where he studies a variety of environmental geology issues that affect Kentuckians, such as water issues and dye tracing techniques, as well as soil, air, and water quality in areas affected by coal fires in the state. In addition, Dr. Garrison has a strong passion for teaching, science advocacy, outreach, and interdisciplinary networking between students and professionals.

As Physical Science Representative and Education & Advocacy Co-Chair of KAS, Dr. Garrison was actively involved in research during the 2018 state legislative session, frequently reporting how HB 200 and other legislation would impact higher education. With input from others in KAS, he authored the letters to our state legislators opposing cuts to higher education, which, along with other groups’ advocacy efforts, led to education cuts not being as severe as originally proposed. He also assisted with KAS’s involvement in the March For Science and spoke about the importance of science outreach and involvement in policy.

Ms. Alexa Johnson, Ph.D. Candidate, Rehabilitation Sciences, University of Kentucky and past participant in the American Association for the Advancement of Science - Catalyzing Advocacy for Science and Engineering (CASE) workshop

Alexa is currently studying biomechanics of the lower extremity in military personnel with low back pain, as well as lower extremity loading mechanics in athletes with anterior cruciate ligament reconstruction. She previously completed her Master’s degree (MS in Kinesiology) at the University of Michigan and her Bachelor’s degree (BS in Kinesiology) at California State University Fullerton. Not only is she passionate about biomechanics and sports medicine but she is also passionate about how to translate our jargon science language to the public so everyone can understand it, aka science communication, as well as advocating for women in STEM. These passions have led to her interest in science policy, where she is now trying to figure out how she can pair a career in research and science policy simultaneously. Last March she was selected by UK to attend a workshop called Catalyzing Advocacy for Science and Engineering (CASE) put on by the American Association for the Advancement of Science (AAAS) where she learned not only about science communication and
science policy but also spent a day on the Hill meeting with Kentucky Congress members advocating for science funding.

Friday, November 2, 2018  1:14pm - 3:00pm

Oral Presentations- Friday Afternoon
Asterisk * denotes student research competition

Friday, November 2, 2018  1:15pm - 3:00pm

Cellular and Molecular Biology - Oral Presentations
Section meeting follows talks at 3:00

1:15 * - Analysis of effects on tRNA modifications and hyphal growth by the elongator complex in C. albicans.

First Author
Justin Rabe
Northern Kentucky University

Co-author
Rachel Morgeson
Northern Kentucky University

Co-author
Jenna Kappes
Northern Kentucky University

Co-author
Daisy Davita
Northern Kentucky University

Co-author
Kaylee Fox
Northern Kentucky University

Co-author
Olivia Gilliam
Northern Kentucky University

Co-author
John Carmen
Northern Kentucky University

Co-author
Michael Guy
Northern Kentucky University

1:30 * - Comparison of differentiation capacity between cell lines using the trilineage differentiation assay.

First Author
Priscila Garcia
Anschutz Medical Campus

1:45 - Investigating How EF-24 and Cisplatin Effect Cancer and Renal Cells

First Author
Denis Hodzic
Western Kentucky University

2:00 * - Oxidative stress mediated downregulation of transcription factor Glis3 results in beta cell dysfunction

First Author
Erin Clayton
Murray State University

Co-author
Gary ZeRuth
Murray State University

Co-author
Murray State University
2:15 * - Targeted integration of fluorescent reporters into iPSCs using CRISPR/Cas9

First Author
Chann Han
Berea College

Co-author
Dennis Roop
University of Colorado Denver - Anschutz Medical Campus

Co-author
Igor Kogut
University of Colorado Denver - Anschutz Medical Campus

Co-author
Ganna Bilousova
University of Colorado Denver - Anschutz Medical Campus

Co-author
Partick Sean McGrath
University of Colorado Denver - Anschutz Medical Campus

Co-author
Kiel Carson Butterfield
University of Colorado Denver - Anschutz Medical Campus

2:30 - The involvement of JAK/STAT signaling during air sac primordium development in Drosophila melanogaster

First Author
Nathan Powers
Western Kentucky University

Co-author
Ajay Srivastava
Western Kentucky University

2:45 * - Transcription factor Gli-similar 3 in pancreatic β cell development and insulin expression

First Author
Lesley Golden
Murray State University

Co-author
Gary ZeRuth
Murray State University

Friday, November 2, 2018 1:15pm - 3:00pm

Computer & Informational Sciences - Oral Presentations
DSU 2113
Section meeting follows talks at 3:00

1:15 - Application of Huffman Coding in Cryptographic hash function SHA-1

First Author
Mustafa Atici
Western Kentucky University

1:30 * - Optically-Linked Raspberry Pi Beowulf Cluster

First Author
Christopher Harton
Murray State University

1:45 * - Analyzing Telomere Sequences: Telomere sequence identification and analysis in fungal genomics

First Author
Friday, November 2, 2018 1:15pm - 3:00pm

**Engineering - Oral Presentations**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:15</td>
<td>High-Throughput Microfluidics to Characterize Subtle Synaptic Phenotypes in C. elegans.</td>
<td>Jean-Pierre Amoakon</td>
<td>Farhan Kamili, Georgia Institute of Technology</td>
</tr>
<tr>
<td>1:30</td>
<td>Implementation of the SPICE Observation Geometry System for the Lunar IceCube Mission</td>
<td>Jacob Schabert</td>
<td>Morehead State University</td>
</tr>
<tr>
<td>1:45</td>
<td>Safety Engineering for a CubeSat: Hazards and Verifications</td>
<td>Katerina Winters</td>
<td>Morehead State University</td>
</tr>
<tr>
<td>2:00</td>
<td>Safety Engineering for a CubeSat: Materials and Usage Requirements</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2:15 - The ThinSat Program: Flight Opportunities and the Future of Small Satellites

First Author
Christopher Coleman
Morehead State University

Co-author
Robert Twiggs
Morehead State University

Co-author
Aaron Zucherman
Morehead State University

Co-author
Jose Garcia
Morehead State University

Co-author
Matt Craft
Twiggs Space Lab

Co-author
Amin Djamshidpour
Twiggs Space Lab

Co-author
Regan Smith
Virginia Space

Co-author
Hank Voss
Near Space Launch

Co-author
Jeff Dailey
Near Space Launch

Co-author
Matt Orvis
Near Space Launch

Environmental Science - Oral Presentations

Friday, November 2, 2018 1:15pm - 3:15pm

WITHDRAWN - A synoptic focus on the January 2016 blizzard and tornado event using satellite and radar imagery

WITHDRAWN - American Chestnut Reintroduction in Kentucky: a GIS Approach

1:45 - An Index-Based Assessment of Tourism Development Impacts on Cold-Climate Hydrologically-Dominant Landscapes

First Author
Jason Fox
Western Kentucky University

Co-author
Leslie North
Western Kentucky University

Co-author
Jason Polk
Western Kentucky University

Co-author
Sydney Herndon
Western Kentucky University

2:00 * - Analysis of the Bioaccumulation of Methylmercury in the Organs and Tissues of Bald Eagles

First Author
Evan Hendrickson
Western Kentucky University

2:15 - Assessment of Emerald Ash Borer Related Canopy Gaps in Kentucky Using Drone-Based Remote Sensing and Plot-Level Data

First Author
Brandon Preece
Kentucky State University

Co-author
Richard Cristan
Kentucky State University

Co-author
Kentucky State University

Co-author
University
2:30 - Comparison of Benthic Macroinvertebrate Sampling Methods on Non-Wadeable Waters: A Study Proposal

First Author
Ed Wilcox
Kentucky State University

Co-author
Richard Cristan
Kentucky State University

2:45 - Ecosystem Exchange of Carbon Dioxide of a Grazed Pasture in Central Kentucky

First Author
Ian Ries
Kentucky State University

Co-author
Maheteme Gebremedhin
Kentucky State University

Co-author
Martin Matisoff
Kentucky State University

Co-author
Ken Andries
Kentucky State University

3:00 - Opportunities for collaborative research and education at a network of field stations in Kentucky

First Author
Stephen Richter
Eastern Kentucky University

Geology - Oral Presentations

Friday, November 2, 2018 1:15pm - 3:15pm
DSU 3002
Section meeting follows talks at 3:15

1:15 - A Geochemical Comparison of two Telogenetic Karst Springs During Reverse Flow, Mammoth Cave, Kentucky

First Author
Chelsey Kipper
Western Kentucky University

Co-author
Patricia Kambesis
Western Kentucky University

Co-author
Jason Polk
Western Kentucky University

1:30 - Do Radioactive Black Shales Potentially Affect Human Health as well as Water Quality of Streams in Eastern Kentucky?

First Author
Mitchell Grothaus
Morehead State University

Co-author
Elizabeth Hereford
Morehead State University

Co-author
Robert Grigsby
Morehead State University

Co-author
Geoffrey Gearner
Morehead State University

Co-author
Timothy Hare
Morehead State University

Co-author
Charles Mason
Morehead State University

1:45 - Fate of Indirect greenhouse gases in Karst Landscapes Associated with Land Use

First Author
2:00 - Incision timing and its relationship to tectonic uplift and climate change: using thermochronology to unravel Ethiopia’s

First Author
Shelby Bowden
Western Kentucky University

Co-author
Nahid Gani
Western Kentucky University

Co-author
Matthijs Van Soest
Arizona State University

Co-author
Royhan Gani
Western Kentucky University

Co-author
Paul O’Sullivan
GeoSeps Services LLC

2:15 - Mass-Transport Deposits in the Northern Gulf of Mexico and Their Implications to Hydrocarbon Exploration

First Author
Michael Arthur
Western Kentucky University

Co-author
M. Royhan Gani
Western Kentucky University

2:30 * - Spectral Analysis of Analog Lunar and Martian Mineral Samples

First Author
Madison Howard
Morehead State University

Co-author
Marianne Peterson
St. Olaf

Co-author
Prabhakar Misra
Howard University

2:45 - Stratigraphic Controls on Cave Passage Development of Dogwood Cave, Hart, County, Kentucky

First Author
Patricia Kambesis
Western Kentucky University

3:00 - Tekeze River Incision Constrained from Apatite (U-Th)/He Dating

First Author
Jacob Grigsby
Western Kentucky University

Co-author
Nahid Gani
Institution

Co-author
Shelby Bowden
Institution

DSU 3006 Section meeting follows talks

Microbiology - Oral Presentations
1:15 * - Effect of Growth Temperature on Mycoplasma iowae Pathogenicity

First Author
Brittany Boyken
Kentucky Wesleyan College

Co-author
Justin Fraizer
Kentucky Wesleyan

Co-author
Rachel Pritchard
Kentucky Wesleyan

1:30 - Host range shift of H3N8 canine influenza virus: A phylodynamics approach to delineate its origin and its adaptation

First Author
Alexander Lai
Kentucky State University

1:45 * - Novel Inactivation of the Causative Fungus of White Nose Syndrome with Methoxsalen and Ultraviolet A Light

First Author
Colin Hartman
Northern Kentucky University

Co-author
Riley James
Northern Kentucky

Co-author
Joseph Mester Ph.D.
Northern Kentucky

Co-author
Alan Cohen M.D.
Northern Kentucky

2:00 * - Potential Use of Essential oils as Alternative Treatment for Bacterial Skin Infections

First Author
Clarissa Gearner
Western Kentucky University

Co-author
Simran Banga
Western Kentucky

2:15 - UV Treatment of Environmental Fungi

First Author
Ashley Wentworth
Northern Kentucky University

Co-author
Joseph Mester
Northern Kentucky

Co-author
Colin Hartman
Northern Kentucky

Co-author
Alan Cohen
Northern Kentucky

2:30 * - Metal and antibiotic cross-resistance among bacteria isolated from the Kentucky River

First Author
William Fenske
Eastern Kentucky University

Co-author
William Staddon
Eastern Kentucky

Co-author
Valerie Peters
Eastern Kentucky

Practice Room
DSU 2081

This space is available for speakers to practice their presentations.
Friday, November 2, 2018  1:15pm - 6:00pm

**Practice Room**

*DSU 3004*

This room is available for speakers to practice their presentations.

Friday, November 2, 2018  2:59pm - 6:00pm

**Poster Session and Social Hour**

Asterisk* denotes student research competition

Downing Student Union, Second & Third floors

Light refreshments will be served. Poster presenters will be at their posters during the session, and posters will remain up until the end of the day on Saturday.

Friday, November 2, 2018  3:00pm - 6:00pm

**Agricultural Science - Poster Presentations**

1. - Accumulation of Heavy Metals in Fruits of Plants Grown in Recycled Sewage Sludge

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERIC TURLEY</td>
<td>George Antonious</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

WITHDRAWN - Applicability of waste-reared black soldier fly larvae as an ingredient in the diet of Nile tilapia


<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nathan Folz</td>
<td>Iin Handayani</td>
<td>Brian Parr</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

4. * - Assessing Soil Quality Indicators in No-Till and Conventional Tillage Systems: Study Case: IL, IN, and KY

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riley Mabe</td>
<td>Kaeden Mollett</td>
<td>Riley Mabe</td>
<td>I. P. Handayani</td>
<td>Brian Parr</td>
<td></td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
<td>Murray State</td>
<td>Murray State</td>
<td>Murray State</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

5. * - Assessing the Rising Plate Meter Method to Determine Forage Production on Organic Dairies

First Author
<table>
<thead>
<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author 1</th>
<th>Co-author 2</th>
<th>Co-author 3</th>
<th>Co-author 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. * - Comparing Characteristics of Soil under Various Management Conditions in Western Kentucky</td>
<td>River Dowell</td>
<td>Lin Handayani</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. * - Economic Viability of Municipal Compost and Equine Stall Waste as Media Amendments in an In-Ground Pot-in-Pot Production</td>
<td>Ashley Robert</td>
<td>Alyx Shultz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. * - Effects of live yeast supplementation on rumen bacterial diversity of beef cattle</td>
<td>Kyle Cannon</td>
<td>Megan Mccoun</td>
<td>Hank Schweickart</td>
<td>Ibukun Ogunade</td>
<td></td>
</tr>
<tr>
<td>10. * - Effects of live yeast supplementation on rumen fluid metabolome of beef cattle</td>
<td>Megan Mccoun</td>
<td>Kyle Cannon</td>
<td>Hank Schweickart</td>
<td>Ibukun Ogunade</td>
<td></td>
</tr>
<tr>
<td>11. - Effects of water soluble fertilizers on growth performance of lotus plants in containers</td>
<td>Changzheng Wang</td>
<td>Changzheng Wang</td>
<td>Lingyu Huang</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. * - Evaluation of Soil Response to the Applications of Ammonium Nitrate and Horse Manures</td>
<td>Sarah Forden</td>
<td>Lin Handayani</td>
<td>Kyle Hanenberger</td>
<td>Ethan Knolhoff</td>
<td>Jeffery Record</td>
</tr>
</tbody>
</table>
### 13. - Food Safety Perceptions and Behaviors of Kentucky Farmer Market Consumers

**First Author**
Hanna(John) Khouryieh
**Co-author**
Marlain Khouryieh
**Institution**
Western Kentucky University

### 14. - Grafting success of eleven pawpaw cultivars and advanced selections using four grafting methods

**First Author**
Sheri Crabtree
**Co-author**
Jeremy Lowe
**Institution**
Kentucky State University

### 15. * - Growth of Pawpaw (Asimina triloba) Seedlings in Two Commercially Available Potting Mixes

**First Author**
Aidan Thompson
**Institution**
Kentucky State University

### 16. - Impact of aerobic compost tea on growth of Lactuca sativa

**First Author**
Ella Potts
**Co-author**
Jessica Stoner
**Institution**
Murray State University

### 17. - Impact of integrated crop-livestock rotation including small ruminants on nitrate and phosphorus concentrations in water

**First Author**
Ellyn Anthony
**Co-author**
Shawn Lucas
**Institution**
Kentucky State University

### 18. - Investigating the Impact of Soil Amendments on Eggplant Production

**First Author**
Yogendra Upadhyaya
**Institution**
Kentucky State
19. - Longitudinal Histological Study of Nosema ceranae in Honey Bees

First Author
Katherine Kamminga
Kentucky State University

Co-author
Thomas Webster
Kentucky State University

Co-author
Martin Matisoff
Kentucky State University

Co-author
Brian Parr
Murray State University

Co-author
Alix Shultz
Murray State University

Co-author
Lin Handayani
Murray State University


First Author
Samantha Peterson
Murray State University

Co-author
Lin Handayani
Murray State University

Co-author
Alix Shultz
Murray State University

Co-author
Brian Parr
Murray State University

21. - The Effect of Sulfur and Copper Fungicides on June Drop of Pawpaw Fruit.

First Author
Sijan Pandit
Kentucky State University

Co-author
Jeremiah Lowe
Kentucky State University

Co-author
Sheri B Crabtree
Kentucky State University

Co-author
Kirk William Pomper
Kentucky State University

22. - Variation in annonaceous acetogenins activity in twig tissues of pawpaw varieties and new advanced selections using.....

First Author
HARRY MOMO
Kentucky State University

Co-author
Jeremiah Lowe
Kentucky State University

Co-author
Sheri Crabtree
Kentucky State University

Co-author
Kirk Pomper
Kentucky State University

23. - Yield Performance of 'Prime-Ark® 45' and 'Black Magic' Grown Organically in Kentucky

First Author
Jeremiah Lowe
Kentucky State University

Co-author
Kirk Pomper
Kentucky State University

Co-author
Sheri Crabtree
Kentucky State University

24. - Ethnographic Study of Ohio River Barge Deckhands

First Author

25. - Preliminary Results From 2017 NKU Excavations at the Glacken Site (15BE272), Big Bone Lick State Historic Site

First Author
Alessa Rulli
Northern Kentucky University

26. * - Multidisciplinary Approaches to Research and Abolitionism Through the Parker Academy

First Author
Andrea Shiverdecker
Northern Kentucky University

Co-author
Samantha Hamilton
Northern Kentucky University

Co-author
Cooper Pfalz
Northern Kentucky University

Co-author
Samantha Hamilton
Northern Kentucky University

Co-author
Cooper Pfalz
Northern Kentucky University

27. * - Uncovering the Women of Parker Academy

First Author
Delaney Gilliam
Northern Kentucky University

Co-author
Lyndsey Mcnabb
Northern Kentucky University

Cellular and Molecular Biology - Poster Presentations

29. - A Genetic Screen for Proteins Involved in ASP Invasion of the Wing Disc of Drosophila melanogaster

First Author
Anas Gondal
Western Kentucky University

Co-author
Hasan Salim
Western Kentucky University

Co-author
Ajay Srivastava
Western Kentucky University

Botany - Poster Presentations

28. * - Cultivation of Peanuts in Oak Tree Saw Dust to Increase Resveratrol

First Author
Wendy Cecil
Western Kentucky University

Cellular and Molecular Biology - Poster Presentations

30. * - Cerebellar gene expression of cabin1

First Author
<table>
<thead>
<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>31. * - Characterization of a Basement Membrane Associated Protein</td>
<td>Aref Ranjbar</td>
<td>Ajay Srivastava</td>
</tr>
<tr>
<td></td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>32. - Cloning Lectins for the Detection of Flavivirus Nonstructural</td>
<td>Natalie Mercer</td>
<td>Krystal Hamorsky</td>
</tr>
<tr>
<td></td>
<td>Kentucky Wesleyan</td>
<td>Kentucky Wesleyan</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>College</td>
</tr>
<tr>
<td>33. - Cysteine Thiol Directed Chemical Modification of a KCNE1</td>
<td>Sharman N</td>
<td>Keenan Taylor</td>
</tr>
<tr>
<td></td>
<td>Sugumaran</td>
<td>Vanderbilt University</td>
</tr>
<tr>
<td></td>
<td>Berea College</td>
<td></td>
</tr>
<tr>
<td>34. * - Damage to Danio Rerio’s Developing Neuromuscular Junction</td>
<td>Diana Schweitzer</td>
<td>Dena Weinberger</td>
</tr>
<tr>
<td></td>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>35. * - De Novo Prediction of the Tail and Capsid Structure of</td>
<td>Alexander Stewart</td>
<td>Claire Rinehart</td>
</tr>
<tr>
<td></td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>36. - Detection of antibiotic resistance genes using engineered</td>
<td>Jiyoung Shim</td>
<td>Moon-Soo Kim</td>
</tr>
<tr>
<td></td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>37. * - Effect of HER2 expression on NUPL2 protein in cervical cancer</td>
<td>Tristan Haight</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cells</td>
<td></td>
</tr>
</tbody>
</table>
### 38. - Evaluation of Genes that May Mediate Individualization in Spermatogenesis

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olivia Honaker</td>
<td>Darren Paris</td>
<td>Douglas Harrison</td>
</tr>
<tr>
<td>Centre College</td>
<td>Murray State</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 39. * - Examining how the FGF signaling pathway effects gene expression within the pharynx during embryonic development

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Wilke</td>
<td>Emily Shifley</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 40. * - Examining the Role that Iroquois Genes Play During Embryonic Development

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maria Stewart</td>
<td>Emily Shifley</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 41. * - Fishing for fertility: Creating a PAM-1 substrate trap to isolate novel fertility-governing proteins

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autumn Graves</td>
<td>Chris Trzepacz</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 42. * - Generation of a transgenic beta cell line for study of Glis3 using CRISPR/Cas9 technology

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>NancyAnn Webster</td>
<td>Gary ZeRuth</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 43. * - Generation of transgenic zebrafish line by CRISPR/Cas9 to evaluate pancreas development and function

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>LilyAnne Grieve</td>
<td>Gary ZeRuth</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Title</td>
<td>First Author</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>44. * - Integrin (^1\beta1) Promotes Kras-Mutated Lung Cancer Proliferation Via Mapk-Independent Mechanism</td>
<td>Kateryna Nabukhotna</td>
</tr>
<tr>
<td></td>
<td>Berea College</td>
</tr>
<tr>
<td>45. * - Investigating a transient expression system in Nicotiana Benthamiana for the production of Novel TALE Proteins</td>
<td>Colleen Jackson</td>
</tr>
<tr>
<td></td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td>University</td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>46. * - Platinum Leaving Ligand Effects on Mammalian Cells</td>
<td>Emily Nole</td>
</tr>
<tr>
<td></td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td>University</td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>47. * - Potential for the green alga Chlamydomonas reinhardtii to degrade lignin</td>
<td>Meg Dillingham</td>
</tr>
<tr>
<td></td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td>University</td>
</tr>
<tr>
<td>48. * - Role of Shear Stress on Endothelial Insulin Sensitivity</td>
<td>Arelí Medina Hernandez</td>
</tr>
<tr>
<td></td>
<td>Berea College</td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>49. - Spinal Cord Injury and its effect on Circadian Rhythm</td>
<td>Charles Thaler</td>
</tr>
<tr>
<td></td>
<td>KBRIN</td>
</tr>
<tr>
<td>50. * - The Bioinformatics of Mycobacteriophage Drake94</td>
<td>First Author</td>
</tr>
<tr>
<td>Title</td>
<td>First Author</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>51. * - The effect of light pollution on immunoresponse and neurogenesis in zebra finches</td>
<td>Andrea Compton, Jennifer Doyle</td>
</tr>
<tr>
<td>52. * - The Effects of Acute Sleep Fragmentation on Microglial Cells</td>
<td>Matthew Knerr</td>
</tr>
<tr>
<td>53. * - The effects of oxidative stress on p75NTR signaling in dopaminergic neurons.</td>
<td>Kendall Nelson</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>54. - The FGF signaling pathway plays an important role regulating gene expression in developing Xenopus laevis embryos</td>
<td>Kelsey Donahue</td>
</tr>
<tr>
<td>55. - The Role of Polarity Genes in Esophageal Adenocarcinoma Metaplasia</td>
<td>Young Koh</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>56. * - Therapeutic and toxicity profile of Pt-Mal-LHRH, a target direct chemotherapeutic for triple negative breast cancer.</td>
<td>Adam Gehlhausen</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Chemistry: Analytical/Physical - Poster Presentations

<table>
<thead>
<tr>
<th>57. * - The Chemical Characterization of Kentucky Honeys</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Author</strong></td>
</tr>
<tr>
<td>Rebecca Jenkins</td>
</tr>
<tr>
<td>Morehead State University</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>58. * - Profiling whiskey fungus using the gas chromatography/mass spectrometry and laboratory serial dilutions methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Author</strong></td>
</tr>
<tr>
<td>Amber Persons</td>
</tr>
<tr>
<td>Kentucky State University</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>59. * - Solid Phase Extraction of Tylosin from Cattle Waste With Determination by Liquid Chromatography Mass Spectrometry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Author</strong></td>
</tr>
<tr>
<td>Anne Carlisle</td>
</tr>
<tr>
<td>Western Kentucky University</td>
</tr>
<tr>
<td>Co-author</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>60. * - Temporal Trend of Illicit and Neuropsychiatric Drug Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Author</strong></td>
</tr>
<tr>
<td>Brittney Nelson</td>
</tr>
<tr>
<td>Murray State University</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>61. * - Using the Liquid Sampling-Atmospheric Pressure Glow Discharge with Capillary Channeled Polymer Fibers for Analysis of Pr</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Author</strong></td>
</tr>
<tr>
<td>Daisy Sullivan</td>
</tr>
<tr>
<td>Berea College</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>62. * - Application of an Analytical Assay for Quantification of Polyphosphate Using Silicon Photonic Microring Resonators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Author</strong></td>
</tr>
<tr>
<td>Beau Schweitzer</td>
</tr>
<tr>
<td>University of Michigan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>63. * - Purification and Analysis of LHRH using HPLC</th>
</tr>
</thead>
</table>
64. Detection of Polyions with Pulsed Chronopotentiometry - Screening Antidotes for the Anticoagulants Low Molecular Heparin

First Author
Sean Greer
Eastern Kentucky University

Co-author
Kyle Rowe
Northern Kentucky University

Co-author
Kebede Gemene
Northern Kentucky University

65. Determination of Ochratoxin A in Kentucky Black Walnuts

First Author
Bryce Forry
Asbury University

Co-author
Bruce Branan
Asbury University

66. Investigating the Diffusion Behavior of Analytes subjected Peak Parking Capillary Electrophoresis

First Author
Lauren Rigg
Northern Kentucky University

67. Predicted Protein Structure and Function of the Bacteriophage: Mithril

First Author
Moria Magre
Spalding University

Co-author
John Burden
Spalding University

68. Modeling Molecular Relaxation Dynamics for Diatom Clathrates

First Author
Levi Curtis
Western Kentucky University

Co-author
Jeremy Maddox
Western Kentucky University

69. Protocols for UHF and UCCSD Potential Energy Curves

First Author
Elizabeth Hedrick
Western Kentucky University

69.5 Unraveling Subtle Intermolecular Interactions in Crystals of a Solar Thermal Fuel.

First Author
Alexander Thome
Murray State University

Co-author
Erin Calvert
Murray State University

Co-author
Kasey Clear
Murray State University

Co-author
Sebastian Jezowski
Murray State University
70. - The Effectiveness of Thin Layer Spin Coating Sodium Acetate

First Author
Corey Mattic, Jr.
Kentucky State University

71. * - Avidin Functionalized Coverslips for Model Membrane Imaging

First Author
Sergio Perez Cruz
Berea College

Co-author
Tessa Calhoun
The University of Tennessee, Knoxville

Co-author
Lindsey Miller
The University of Tennessee, Knoxville

72. * - Effects of Various Buffers and Parameters on the Structure and Behavior of Stimuli-Responsive Polymers

First Author
Madisyn Hayes
Northern Kentucky University

Co-author
Eric Milner
Northern Kentucky University

73. - A Dispersed REU Program on Theoretically Interesting Molecules (TIM)

First Author
KC Russell
Northern Kentucky University

Co-author
John Benber
Grand Valley State University

Co-author
Shannon Biros
Grand Valley State University

Co-author
Peter Iovine
University of San Diego

Co-author
Jeff Katz
Colby College

Co-author
Kristine Nolin
University of Richmond

Co-author
Ellen Ellen Yezirski
Miami University

74. - Synthesis of Oxacalixarenes from Silyl Protected Precursors

First Author
KC Russell
Northern Kentucky University

Co-author
Kimberly Richards
Northern Kentucky University

Co-author
Bailey Hardey
Northern Kentucky University

Co-author
Rachel Holland
Northern Kentucky University

75. - Catalytic Bis(imino)pyridine Iron Complexes for Carbene Reactions of Diazo Compounds

First Author
Ban Wang
Western Kentucky University

Co-author
Isaac Howard
Western Kentucky University

76. - Interaction of a platinum tri-amine complex having a seven-membered chelate ring with 5'-GMP and N-AcMet

Friday, November 2, 2018 3:00pm - 6:00pm
77. * - Synthesis of metal-organic frameworks mimicking carbonic anhydrase enzyme.

First Author
Simrat Kaur
WESTERN KENTUCKY UNIVERSITY
Co-author
BANGBO YAN
WESTERN KENTUCKY UNIVERSITY

77.5. - An in vitro Study on Skin Protection Across the UV Spectra

First Author
Cheyenne Boone
KENTUCKY STATE UNIVERSITY/UNIVERSITY OF KENTUCKY

78. * - Phosphonium-containing Poly(ionic liquid) Networks Prepared From Thiol-ene 'Click' Photopolymerization

First Author
Samantha Sims
MURRAY STATE UNIVERSITY
Co-author
Rachel Whittaker
MURRAY STATE UNIVERSITY
Co-author
Kevin Miller
MURRAY STATE UNIVERSITY

79. * - Highly efficient and selective oxidation of sulfides catalyzed by manganese corroles with iodobenzene diacetate

First Author
Ben Willis
WESTERN KENTUCKY UNIVERSITY
Co-author
Davis Ranburger
WESTERN KENTUCKY UNIVERSITY
Co-author
Benjamin Kash
WESTERN KENTUCKY UNIVERSITY
Co-author
Christian Alcantar
WESTERN KENTUCKY UNIVERSITY
Co-author
Rui Zhang
WESTERN KENTUCKY UNIVERSITY

80. * - Enantioselective Cross Aldol Reactions of Aldehydes

First Author
Samantha Bradley
MOREHEAD STATE UNIVERSITY
Co-author
Chase Slone
MOREHEAD STATE UNIVERSITY
Co-author
Brandon Vanness
MOREHEAD STATE UNIVERSITY

81. * - Investigating the Synthesis of LMA-P2

First Author
Sarah Little
82. * - Palladium-Catalyzed Heteroarylation Under Microwave Irradiation

First Author: Adrianna Goodwin
Northern Kentucky University

First Author: Seth Klaine
Western Kentucky University

83. * - Generation and kinetic studies of porphyrin-manganese(IV)-oxo intermediates

First Author: Hannah Brooks
Western Kentucky University

84. * - Synthesis and photocatalytic properties of three metal-organic framework materials

First Author: Kiah Gledhill
Kentucky Wesleyan College

85. * - The Syntheses of Heteroatom-activated Antibiotics

First Author: Rachel Chute
Murray State University

86. * - Iron Catalyzed Oxidation of Amines to Imines

First Author: Levi Blevins
Berea College

87. * - Solid Phase Organic Synthesis of an Antibody Drug Conjugate Linker

First Author: Jacolby Gardner
University of Kentucky

88. * - Phenylethynyloxacalixarenes Synthesis

First Author: Ominica Crockett
Berea College

89. * - Synthesis and Mechanism study of Isocoumarin Analogues
90. * - Annulene-Oxacalixarene Hybrids

First Author  Co-author  Co-author
Elizabeth Osifalujo  Andrew Quillen  Lili Ma
Northern Kentucky University  Northern Kentucky University  Northern Kentucky University

91. * - Synthesis and reactivity of platinum(II) anticancer drug analogs with unsymmetrical ligands

First Author  Co-author  Co-author
Emily Brown  Nicholas Spark  Eli Biedenbender
Berea College  colleague  colleague
Western Kentucky University  Western Kentucky University  University

92. * - Solid Phase Organic Synthesis of an Antibody Conjugate Linker?

First Author  Co-author
Ominica Crockett  Levi Blevins
Berea College  Berea College
Berea College

Computer & Informational Sciences - Poster Presentations


First Author  Co-author
Amanda Hansford  Heba Elgazzar
Morehead State University  Morehead State University

94. - Encoding and Decoding Messages in Android Applications

First Author
Richard Pike
Western Kentucky University

95. * - Smart Routing Schemes for Dynamic Spectrum Access Network Architectures

First Author
Brian Luciano
University of Kentucky

96. * - Neighborhood Graphs for Cities in Kentucky: comparison for two distance measures

First Author
<table>
<thead>
<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>97. * - Nutrient Export of the Kentucky River to Detect Possible Eutrophication</td>
<td>Ieisha Hopwood</td>
<td>Kazi Javed</td>
<td>Tamara Sluss</td>
<td>Li Lu</td>
</tr>
<tr>
<td></td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
</tr>
<tr>
<td>98. - Litter Breakdown and Invertebrate Detritivores from a Hydrologically Restored Stream</td>
<td>Jacob Becraft</td>
<td>Amy Braccia</td>
<td>Carl Gittings</td>
<td>Eastern Kentucky University</td>
</tr>
<tr>
<td></td>
<td>Eastern Kentucky University</td>
<td>Graduate Advisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eastern Kentucky University</td>
<td>Eastern Kentucky University</td>
<td>Eastern Kentucky University</td>
<td></td>
</tr>
<tr>
<td>100. - The Effects of Salinity on the Juvenile Freshwater Crayfish Procambarus clarkii</td>
<td>Alexandra Ghinn</td>
<td>Kyle Laufenburger</td>
<td>Ben Brammell</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bellarmine University</td>
<td>Asbury University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>101. * - Evaluation of biomass and filtration method on eDNA detection of fantail darters (Etheostoma flabellare)</td>
<td>Ramon Guivas</td>
<td>Florene Bell</td>
<td>Kenton Sena</td>
<td>Thomas Maigret</td>
</tr>
<tr>
<td></td>
<td>Asbury University</td>
<td>Asbury University</td>
<td>University of Kentucky</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chi Jing Leow</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102. * - Use of eDNA in detection of multiple salamander species in eastern Kentucky streams</td>
<td>Angie Flores</td>
<td>Florene Bell</td>
<td>Kenton Sena</td>
<td>Thomas Maigret</td>
</tr>
<tr>
<td></td>
<td>Asbury University</td>
<td>Asbury University</td>
<td>University of Kentucky</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chi Jing Leow</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103. * - Detection of species using eDNA in high elevation habitats in the Sierra Nevada in Sequoia-</td>
<td>Ramon Guivas</td>
<td>Florene Bell</td>
<td>Kenton Sena</td>
<td>Thomas Maigret</td>
</tr>
<tr>
<td></td>
<td>Asbury University</td>
<td>Asbury University</td>
<td>University of Kentucky</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chi Jing Leow</td>
</tr>
<tr>
<td>Title</td>
<td>First Author</td>
<td>Co-author</td>
<td>Co-author</td>
<td>Co-author</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------</td>
<td>------------------------------------------------</td>
<td>---------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>104. - Effect of Plastic Microbeads in Two Face Washes on Zebrafish Reproductive Success</td>
<td>Autumn Holley</td>
<td>Indigo Thoman</td>
<td>Tracy Livingston</td>
<td>Georgetown College</td>
</tr>
<tr>
<td>105. - Accessing the Direct Toxicity of the Plant Volatile Indole on Herbivores</td>
<td>Rakhi Patel</td>
<td>Abhinav Maurya</td>
<td>Christopher Frost</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>106. * - Honeysuckle leaf blight increases leaf loss in Amur honeysuckle</td>
<td>Natalie Holsclaw</td>
<td>Allison Jones</td>
<td>Richard Boyce</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>107. - Ecosystem functional consequences of top predator amphibian mortality due to the invasive shrub, Lonicera maackii</td>
<td>Josey Berta</td>
<td>Cy Mott</td>
<td></td>
<td>Eastern Kentucky</td>
</tr>
<tr>
<td>110. - Ecosystem functional consequences of body size variation in an apex predator</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
111. * - Trophic effects of intraspecific body size variation among exploitative and interference competitors  

First Author  
Renae Steinberger  
Eastern Kentucky University

112. * - Determining the Cyanogenic Potential of Two Land Races of Lima Bean, Phaseolus lunatus  

First Author  
Maria Shields  
University of Louisville

113. * - Do Drip Tips Benefit Leaves in Both the Understory and Canopy of a Neotropical Rainforest?  

First Author  
Makenna Thibodeaux  
University of Louisville

114. * - Do phenotypically plastic apex predators exhibit discrete patterns of local adaption to their invertebrate prey?  

First Author  
Austin Farson  
Eastern Kentucky University

115. - Does Life History Variation Mediate the Effects of Disease?  

First Author  
Alex Woolen  
Murray State University

116. - A phylogenetic examination of the Pseudanophthalmus cave beetles (Carabidae) of western Kentucky.  

First Author  
Jedidiah Nixon  
Western Kentucky University

117. - The Effect of Malathion Toxicity on Zebrafish Caudal Fin Regeneration  

First Author  
Indigo Thoman
118. - Comparison Study of Various CNN AI architectures for Prediction of Metal Sample Failure based on SEM images

First Author
Lawrence Madriaga
Western Kentucky University
Co-author
Ivan Novikov
Western Kentucky University
Co-author
Morteza Nurcheshmeh
Western Kentucky University

119. - Using NASA's Land Information System (LIS) for hydrological and land-atmosphere coupling studies and as a lower boundary

First Author
Charles O'Connell
Western Kentucky University
Co-author
Eric Rappin
Western Kentucky University

120. - A Karst Disturbance Index Map for Hidden River Cave

First Author
Anna Harris
Western Kentucky University
Co-author
Patricia Kambesis
Western Kentucky University

121. * - A Synoptic Analysis of the 2012 Ohio Valley Heat Wave and an Investigation of the Effect on Public Health in Kentucky

First Author
Christopher Padgett
Western Kentucky University

122. - Can remote sensing be used to accurately predict beaver activity?

First Author
Melody Feden
Murray State University
Co-author
Haluk Cetin
Murray State University

123. * - Case Study of the Significant Cold Temperatures February 14th-20th, 2015
124. - Deriving Climate Statistics based on Kentucky Mesonet Observations

First Author
Eric Rappin
Western Kentucky
University

Co-author
Stuart Foster
WKU, Kentucky
Climate Center, Kentucky Mesonet

Co-author
Megan Schargorodski
WKU, Kentucky
Climate Center, Kentucky Mesonet

Co-author
Andrew Quilligan
WKU, Kentucky
Climate Center, Kentucky Mesonet

Co-author
Patrick Collins
WKU, Kentucky
Climate Center, Kentucky Mesonet

Co-author
Charles O'Connell
WKU, Kentucky
Climate Center, Kentucky Mesonet

125. - The Kentucky Forecasting System

First Author
Eric Rappin
Western Kentucky
University

126. - Evaluation of gluconic acid for the control of Nosema ceranae, a microsporidian infecting honey bees, Apis mellifera

First Author
Jacob Vincent
Kentucky State
University

Co-author
Katherine Kamminga
Kentucky State
University

Co-author
Thomas Webster
Kentucky State
University

127. * - Mercury Bioaccumulation in Bats from Mammoth Cave National Park

First Author
Isabel Chumbler
Western Kentucky
University

128. * - Testing Nutrient Levels of Water Kentucky River for Harmful Algae Bloom Forecasting

First Author
Imani Harris
Kentucky State
University

Co-author
Li Lu
Kentucky State
University

Co-author
Javed Kazi
Kentucky State
University

Co-author
Tamara Sluss
Kentucky State
University

129. * - Use of a Reduced Sulfur Gas Chromatograph with Custom-made Permeation Tube for Analysis of Sulfur Compounds

First Author
Spencer Toms
130. * - Using remote sensing and GIS to study the development of Harmful Algal Blooms in Lake Erie.

First Author
Steven Collett
Murray State University


First Author
Josh Durkee
Western Kentucky University

Co-author
Tori Murley
ECTC

132. * - The Impact of Urban Heat Island Magnitude on Organized Convective Systems

First Author
Logan Twohey
University of Louisville

Co-author
Jason Naylor
University of Louisville

133. * - Comparing water quality variables between first order streams located in agricultural and heavily forested communities

First Author
Caitlin Mullins
Kentucky State University

134. - Trends in Total Suspended Solids (TSS) Discharge of Headwater Streams in Agricultural and Forested Watersheds

First Author
Jarod Jones
Kentucky State University

135. * - Observing Trends in Foodborne Illnesses and Health and Food Codes in the United States

First Author
Megan Paule
Murray State University

136. * - Comparing Accuracy of Supervised Image Classification of Wetlands in the Kentucky River Basin to the NLCD
137. * - The spatial distribution of local and organic food availability in Kentucky

First Author
Ariel Smith
Kentucky State University

Friday, November 2, 2018 3:00pm - 6:00pm

Geology - Poster Presentations

138. * - Anthropogenic Impacts on Encrusters in Association with Mercenaria mercenaria in Long Island Sound

First Author
Marie White
Murray State University

139. * - Dye Trace Study of Karst Groundwater Flow at Mystery Spring and Wildcat Culvert in Lexington, Fayette County, Kentucky

First Author
Constance Brown
Northern Kentucky University

140. * - Quantifying Hyporheic Flow in Beaver Ponds of Varying Size and Stream Morphology

First Author
Colton Sanders
Murray State University

141. - Seismic Interpretation of the North-Central Gulf of Mexico: Implications for Salt Tectonic Modeling

First Author
Adam Mattson
Western Kentucky University
## Health Science - Poster Presentations

**142. * - Altered Immune Cell Profile Contributes to Increase Risk of Heart Disease in Aging Mice**

*First Author*
Aubrey Melton  
Berea College

*Co-author*
Renee Donahue  
University of Kentucky

*Co-author*
Marlene Starr  
University of Kentucky

*Co-author*
Ahmed Abdel-Latif  
University of Kentucky

---

**143. * - Glutamate-Induced Apoptosis on Olfactory Neuroepithelial Progenitors Derived from Bipolar and Non-Bipolar Subjects**

*First Author*
Kristen Miller  
Western Kentucky University

*Co-author*
Yonglin Gao  
University of Louisville

*Co-author*
Rifaat El-Mallakh  
University of Louisville

---

**144. * - Relationship between boneless meat yield and the size of Asian carp**

*First Author*
Kaitlyn Sudd  
Kentucky State University

---

**145. * - Parasite load as an indicator for zoonotic disease prevalence in feral cats versus shelter cats**

*First Author*
Nicole Creeden  
Murray State University

---

**146. * - Physical Activity and Health Patterns of Berea Trail Town Users**

*First Author*
Jaden Johnson  
Berea College

*Co-author*
Louisa Summers  
Berea College

*Co-author*
Glendy Pineda  
Berea College

---

**147. * - Effects of corn starch on the textural characteristics of fish meatballs prepared from deboned Asian carp meat.**

*First Author*
Changzheng Wang  
Kentucky State University

*Co-author*
Lingyu Huang  
Kentucky State University
### WITHDRAWN - Assessment of learning styles and learning retention among the elderly population in Frankfort, Kentucky

149. * - Sterilization of Staphylococcus aureus and Pseudomonas aeruginosa using Sanitrol

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riley James</td>
<td>Joseph Mester</td>
<td>Jonathan Schneider</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
<td>Rem Brands</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

### 150. * - L-Serine Reduces Reactive Oxygen Species Yield in Cisplatin Treated Zebrafish Utricles

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elvin Irihamye</td>
<td>Satya Moolani</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 151. * - Role of Gonadal Hormones in Cognitive Impairment Due to Hypovolemic Dehydration

<table>
<thead>
<tr>
<th>First Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evy Perler-Tomboly</td>
</tr>
<tr>
<td>University of Kentucky</td>
</tr>
</tbody>
</table>

### 152. - Loss of plasmid in plasmid-carrying strains of Escherichia coli treated with phenoxazines

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.N. Thimmaiah</td>
<td>Mark Montgomery</td>
<td>Larry Sylvester</td>
<td>Padma Thimmaiah</td>
<td>Ashish Pagare</td>
</tr>
<tr>
<td>Northwest MS Community</td>
<td>Northwest MS Community</td>
<td>Community College</td>
<td>Northwest MS Community</td>
<td>Community College</td>
</tr>
<tr>
<td></td>
<td>Paul Grisham</td>
<td>Lindsay Massie</td>
<td>Piya Adris</td>
<td>Sarah Holt</td>
</tr>
<tr>
<td></td>
<td>Community College</td>
<td>Community College</td>
<td>Community College</td>
<td>Community College</td>
</tr>
<tr>
<td></td>
<td>Darrell Barnes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northwest MS Community</td>
<td>Community College</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 153. - Survival time distribution of advanced stage metastatic melanoma among Whites and Minority populations in Florida

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frederick Bebe</td>
<td>Shasa Hu</td>
<td>Tony Brown</td>
<td>Orien Tulp</td>
</tr>
<tr>
<td>Kentucky State University</td>
<td>University of Miami, Miller College of Medicine</td>
<td>NIH, National Cancer Institute</td>
<td>University of Science, Arts and Technology</td>
</tr>
</tbody>
</table>

### 154. * - The Effect of Chronic Sleep Fragmentation and 6-OHDA on Microglia Activation

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kristen Eads</td>
<td>Ila Mishra</td>
<td>Noah Ashley</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>
155. * - The Health and Economic Impact of the Pinnacle Trails in a Kentucky Trail Town

First Author
Glendy Pineda
Berea College

Co-author
Louisa Summers
Berea College

Co-author
Jaden Johnson
Berea College

156. * - Vitreous Syneresis in the Human Eye

First Author
Meg Glenn
KBRIN (UofL)

Co-author
Douglas Borchman
University of Louisville

Friday, November 2, 2018 3:00pm - 6:00pm

Mathematics - Poster Presentations

157. - Investigating Tire Tracks to Determine a Vehicles Direction

First Author
Richard Cyrus
Morehead State
University

158. - Predictive MLS Soccer Ratings

First Author
Taylor Ray
Morehead State

Microbiology - Poster Presentations

159. - A Close Look at the K1 Bacteriophages Capricorn and Dalmuri, Including Similarities and Differences

First Author
Harrison Gover
Western Kentucky University

Co-author
Claire Rinehart
Western Kentucky University

Co-author
Anmol Sandhu
Western Kentucky University

Co-author
Sahil Chhabra
Western Kentucky University

Co-author
Samuel Chang
Western Kentucky University

160. * - An Introduction to the Forms and Functions of the A4 Mycobacteriophage Wizard007

First Author
Samuel Chang
Western Kentucky University
161. - Characterization of Mycobacteriophage MooMoo

First Author: Amanda Staples
Co-author: Rodney A. King
Western Kentucky University

162. * - Clostridium isolate growth in a zinc-limited environment

First Author: Kamila Nurmakova
Co-author: Christopher Lopez
Berea College

163. * - Effect of Growth Temperature on Mycoplasma iowae Pathogenicity

First Author: Christopher Frazier
Co-author: Brittany Boyken
Kentucky Wesleyan College

164. * - Immunity Repressor Gene Regional Difference May Control Gene Expression of Lytic and Lysogenic Life Cycles

First Author: Sahil Chhabra
Co-author: Harrison Gover
Western Kentucky University

165. - Role of tRNA modifications in the regulation of pseudohyphal growth in yeast

First Author: Kaylee Fox
Co-author: John Carmen
Northern Kentucky University

166. * - Ruin Genome

First Author: Anmol Sandhu
WKU

167. - The House Sparrow as a Better Model for the Human Gut Microbiome

First Author: Joshua Nowacki
Co-author: Jordan Stacy
KBRIN
Physics and Astronomy - Poster Presentations

168. * - Contemporaneous Ground-Based Observations of Blazars Observed with NASA's K2 Mission
First Author
Zoe Ward
Western Kentucky University Dept. of Physics and Astronomy
Co-author
Michael Carini
Western Kentucky University Dept. of Physics and Astronomy

169. * - Development of a LabView Controlled Rotational Support System for the Dual Radiation Rotating Scattering Mask
First Author
Devon Loomis
Western Kentucky University
Co-author
Alexander Barzilov
University of Nevada, Las Vegas
Lawrence Madriaga
Western Kentucky University
Ivan Novikov
Western Kentucky University
Seth Harper
Western Kentucky University

170. * - Electrochemical Desulfurization and Electroactivity of Molybdenum Disulfide (MoS2) Nanocatalysts on Reduced Graphene
First Author
Taylor Robinson
Western Kentucky University
Co-author
Jacob Dobler
Western Kentucky University
Sanju Gupta
Western Kentucky University

171. * - Engineered Nanocomposite Materials Properties through Embedding of Smaller Nanoparticles in a Polymer Matrix
First Author
Alex Henson
Western Kentucky University
Co-author
Sanju Gupta
Western Kentucky University

First Author
Alexander Banaszak
Western Kentucky University
Co-author
Sanju Gupta
Western Kentucky University

173. * - Graphene-Polymer Thin Film Composite Membranes as Efficient and Anti-fouling Membranes for Water Purification
First Author
Brendan Evans
174. * - Hydrothermally Synthesis and Properties of Mesoporous Molybdenum Disulfide (MoS2) Reduced Graphene Oxide Composites

First Author
Jacob Dobler
Western Kentucky University

Co-author
Taylor Robinson
Western Kentucky University

Co-author
Sanju Gupta
Western Kentucky University

175. * - Improving Accuracy of Parity Violation Measurements for NOPTREX Experiment at LANL

First Author
Daniela Olivera Velarde
Berea College

Co-author
Danielle Schaper
University of Kentucky

Co-author
Christopher Crawford
University of Kentucky

176. * - Investigating the Efficacy of Histotripsy on Drug Delivery

First Author
Heather Thompson
Berea College

Co-author
Benjamin Wollant
St. Olaf College

Co-author
Kenneth Bader
University of Chicago

177. * - Microstructure and Properties of Layered Transition Metal Carbides (Ti3C2Tx) MXenes Phases

First Author
Wyatt Ringo
Western Kentucky University

Co-author
Sanju Gupta
Western Kentucky University

178. * - Phase transitions in charged black holes

First Author
Emily Frame
Northern Kentucky University

Co-author
Sharmanthie Fernando
Northern Kentucky University

179. * - Photon Simulation Studies for the Dark Energy Science Collaboration (DESC) at LSST (Large Synoptic Survey Telescope)

First Author
Sean Lawless
Bellarmine University

Co-author
Carlos Galindo
Bellarmine University

Co-author
Akhtar Mahmood
Bellarmine University

Co-author
Muhammad Saleem
Bellarmine University

180. * - Robotics with Humanoid Robot NAO and Hexapod (Robotic Spider)

First Author
Carlos Galindo
Bellarmine University

Co-author
Muhammad Saleem
Bellarmine University

Co-author
Akhtar Mahmood
Bellarmine University
181. * - Self-Assembly of Spheres on a Cone Surface

First Author
Talha Rehman
Berea College

182. * - Systematic Study of the Effect of Incorporation of Carbon Nanotubes into GexSe1-x Glass System

First Author
John Adamick
Northern Kentucky University
Co-author
John Rademacher
Northern Kentucky University
Co-author
Wayne Bresser
Northern Kentucky University
Co-author
Chari Ramkumar
Northern Kentucky University

183. * - XMM-Newton Observations of the Galactic Supernova Remnants G5.9+3.1 and G32.4+0.1

First Author
Lori Porter
Craft Academy
Co-author
Thomas Pannuti
Morehead State University

184. - Time series analysis of the rapid optical variability observed in Blazars with NASA’s K2 Mission.

First Author
Kennedy Pendleton
2001
Co-author
Michael Carini
Department of Physics and Astronomy
Western Kentucky University

185. - Procedure improvement for FAPbl3 perovskite solar cells

First Author
Valeria Rosa Rocha
Berea College
Co-author
Somin Park
University of Kentucky

186. - Measurements of the entanglement of quantum of lights due to spontaneous parametric down conversion

First Author
Eli Prater
Berea College
Co-author
Martin Veillette
Berea College
Co-author
Brian Leist
Berea College
Co-author
Mothi Ghimire
Berea College

Friday, November 2, 2018  3:00pm - 6:00pm

Physiology and Biochemistry - Poster Presentations

187. * - A functional module for a response to low nutrients in Arabidopsis

First Author
Muntathar Alshimary
Berea College
Co-author
DeQuantarius Speed
University of Chicago
Co-author
Jean Greenberg
University of Chicago

188. * - Computational and experimental approaches to study the role of protein modifications by urea
in kidney disease

First Author
JT Toebbe
Murray State University

Co-author
Michael Merchant
University of Louisville

Co-author
Daniel Wilkey
University of Louisville

189. * - Disruption of cell adhesion, loss of Arp2/3 complex function in macrophages are not sufficient to induce NF-kB activity

First Author
Imelda Saintilma
Berea College

Co-author
Jeremy Rotty
Uniformed Services University of the Health Sciences

190. * - Disruption of choline acetyltransferase (ChAT) by congenital mutations: Screening potential therapeutic leads

First Author
Abigail Whitaker
Berea College

Co-author
David Rodgers
University of Kentucky

191. * - Dose-dependent induction of circulating SAA, and pulmonary inflammation after ozone exposure: Alzheimer' Disease Link

First Author
Helina Asrat
Berea College

Co-author
Michelle Erickson
US Department of Veterans Affairs

192. * - Effects of TEA and 4-AP on Firing Frequency of Proprioceptive Neurons in Crustaceans

First Author
Emma Higgins
University of Kentucky

Co-author
Allison Lane
University of Kentucky

Co-author
Alexandra Stanback
University of Kentucky

Co-author
Maddie Stanback
University of Kentucky

Co-author
Ross Basham
University of Kentucky

Co-author
Bernardo Aguzzoli Heberle
University of Kentucky

Co-author
Aaron Silverstein
University of Kentucky

Co-author
Bennett Collis
University of Kentucky

Co-author
Bharath Chithrala
University of Kentucky

Co-author
Robin Cooper
University of Kentucky

193. * - Mechanism of quinolone resistance in Escherichia coli type II topoisomerases

First Author
Nyasha Gombami
Berea College

Co-author
Alexandria Oviatt
Vanderbilt University

Co-author
Neil Osheroff
Vanderbilt University

Medical Center

194. - P. gingivalis infection debilitates anti-viral immune responses in gingival epithelial cells
<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashley Cravens</td>
<td>Diane Price</td>
<td>Juhi Bagaitkar</td>
<td>Richard Lamont</td>
<td></td>
</tr>
<tr>
<td>Bellarmine University</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
<td>School of Dentistry</td>
</tr>
</tbody>
</table>

195. * - Pharmacological identification of cholinergic receptor subtypes in modulation of neural circuits in *D. melanogaster*

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Umair Bhutto</td>
<td>Eashwar</td>
<td>Robin Cooper</td>
</tr>
<tr>
<td>University of Kentucky</td>
<td>Somasundaram</td>
<td>University of Kentucky</td>
</tr>
</tbody>
</table>

196. * - Placental Transfer and Metabolism of FDA-approved Drugs Repurposed for Novel Tocolytic Use

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison Harper</td>
<td>Shajila Siricilla</td>
<td>Raymond Johnson</td>
<td>Lauren Lambert</td>
<td>Jennifer Herington</td>
</tr>
<tr>
<td>Berea College</td>
<td>Vanderbilt University</td>
<td>Vanderbilt University</td>
<td>Vanderbilt University</td>
<td>Vanderbilt University</td>
</tr>
</tbody>
</table>

197. - Regulation of Programmed Genome Rearrangement in the Sea Lamprey

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taylor Stewart</td>
<td>Gena Wilson</td>
<td>Cody Saraceno</td>
<td>Jeremiah Smith</td>
</tr>
<tr>
<td>Centre College</td>
<td>Murray State University</td>
<td>University of Kentucky</td>
<td>University of Kentucky</td>
</tr>
</tbody>
</table>

198. - TBF-B Pathway in relation to down regulation of PTTG gene expression

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alanis Morgan</td>
<td>Karthik Suresh</td>
<td>Xin Yan</td>
<td>Laura Servinsky</td>
</tr>
<tr>
<td>Kentucky Biomedical Research Infrastructure Network</td>
<td>Johns Hopkins Div of Pulmonary and Critical Medicine</td>
<td>Johns Hopkins Div of Pulmonary and Critical Care Medicine</td>
<td>Johns Hopkins Div of Pulmonary and Critical Care Medicine</td>
</tr>
</tbody>
</table>

199. * - The Role of Reactive Oxygen Species in Regulating TRPV4 Responses to Stimuli

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zackery Hill</td>
<td>Karthik Suresh</td>
<td>Xin Yan</td>
<td>Laura Servinsky</td>
<td>Haiyang Jiang</td>
</tr>
<tr>
<td>University of Pikeville</td>
<td>Johns Hopkins Div of Pulmonary and Critical Medicine</td>
<td>Johns Hopkins Div of Pulmonary and Critical Care Medicine</td>
<td>Johns Hopkins Div of Pulmonary and Critical Care Medicine</td>
<td>Johns Hopkins Div of Pulmonary and Critical Care Medicine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larissa Shimoda</td>
<td>Johns Hopkins Div of Pulmonary and Critical Care Medicine</td>
</tr>
<tr>
<td>Title</td>
<td>First Author</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>201. * - Sustaining Attention: The Effects of Fidgeting and Break type</td>
<td>briana beckler</td>
</tr>
<tr>
<td>202. * - User Acceptance of Automated Vehicles</td>
<td>Vanessa Jones</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td>Gregory Corso</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>203. * - The independence of implicit and explicit sequence learning</td>
<td>Allison Ludwig</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td>Gilberremillard</td>
</tr>
<tr>
<td>204. * - Amazon Mechanical Turk Responses vs. Student Responses</td>
<td>Emily Lush</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td>Gregory Corso</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>205. * - Emphasis and &quot;only&quot; influence sentence interpretation</td>
<td>Victoria Nash</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
</tr>
<tr>
<td></td>
<td>David Potter</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Science Education - Poster Presentations

**206.** - An Interactive Earth: Augmented Reality and Hands-On Earth Science Inquiry in Schools  
*First Author*  
Olivia Santangelo  
*University*  
Western Kentucky University

**207.** - Impact of Problem Based Team Learning on Underserved Students in Introductory Biology and Genetics Courses  
*First Author*  
Shelby Diener  
*University*  
Northern Kentucky University

### Zoology - Poster Presentations

**208.** - Effects of Foraging Enrichment Predictability on the Behavior and Space Use of Zoo-housed Elephants  
*First Author*  
Cassondra Perkins  
*Kentucky Wesleyan College*  
Co-author  
Greg Vicino  
*San Diego Zoo Global*  
Co-author  
Angela Mackey  
*Kentucky Wesleyan College*

**209.** - Zebrafish Spawning Conditions and Their Effects on Egg Success and Clutch Size  
*First Author*  
Sydni Anderson  
*Murray State University*  
Co-author  
Dena Weinberger  
*Murray State University*  
Co-author  
University

**210.** - The Influence of Endotoxic LPS on Primary Sensory Neurons in Crustaceans  
*First Author*  
Maddie Stanback  
*University of Kentucky*  
Co-author  
Alexandra Stanback  
*University of Kentucky*  
Co-author  
Kelsi Vela  
*University of Kentucky*  
Co-author  
Ross Basham  
*University of Kentucky*  
Co-author  
Bernardo Aguzzoli  
*Heberle University of Kentucky*  
Co-author  
Aaron Silverstein  
*University of Kentucky*  
Co-author  
Allison Lane  
*University of Kentucky*  
Co-author  
Bennett Collis  
*University of Kentucky*  
Co-author  
Heberle  
*University of Kentucky*  
Co-author  
Kelsi Vela  
*University of Kentucky*  
Co-author  
Robin Cooper  
*University of Kentucky*  
Co-author  
Heberle  
*University of Kentucky*  
Co-author  
Bharath Chithrala  
*University of Kentucky*  
Co-author  
Robin Cooper  
*University of Kentucky*  
Co-author  
Heberle  
*University of Kentucky*  
Co-author  
Bharath Chithrala

**211.** - Do Males Adjust Courtship Displays According to Female Feedback?

First Author
Jonathan Eisenhour
Morehead State University

Co-author
Matthew Fossett
Morehead State University

Co-author
David Eisenhour
Morehead State University

213. - Polyandry and polygyny in green salamanders, Aneides aeneus

First Author
Paul Cupp Jr
Eastern Kentucky University

214. * - Comparing the seasonal variation in distribution and abundance of anuran species in Daviess Co, KY.

First Author
Jordan Danflous
Kentucky Wesleyan College

Co-author
Shannon Finerty
Kentucky Wesleyan College

215. * - Overwintering implications for the cercaria of the diagenetic trematode, Proterometra macrostoma

First Author
Sarah Tabor
Berea College

Friday, November 2, 2018  7:00pm - 10:00pm

Reception and Plenary at National Corvette Museum
Facilitated by President-Elect Leslie North

Free Shuttles to Corvette Museum begin at 6:30

"Behind the Scenes at the Corvette Cave-In"

Get the inside story from scientists on the now-famous sinkhole at the National Corvette Museum and find out how an interdisciplinary team of scientists and technicians came together to study and repair the sinkhole, as well as develop the Corvette Cave-In Sinkhole Exhibit at the museum.

The reception and plenary are included in your meeting registration, and entrance to the museum is included with this event. Tour the exhibit with your fellow scientists and learn about the cars and the karst!

The 2018 Science Education & Outreach Award will be presented at this program
available between Downing Student Union, the National Corvette Museum and the Hyatt Place beginning at 6:30pm.

Bring a guest- Guest tickets for this Friday night event are available for $25

Featured Speakers

**Jason S. Polk, Ph.D.**
Associate Professor of Geography and Geology
Western Kentucky University

He also is the Director of the Center for Human-GeoEnvironmental Studies (CHNGES) and HydroAnlaytical Lab. Dr. Polk earned his doctorate degree from the University of South Florida in Geography and Environmental Science and Policy. His current research investigates climate change, karst landscapes and processes, water resources and sustainability, isotope hydrology and geochemistry, and global climate dynamics. Dr. Polk is a Fellow of the National Speleological Society, Chair of the Geological Society of America Karst Division, and conducts research in various places all over the world, including the Caribbean, Vietnam, Iceland, and elsewhere. Dr. Polk will be speaking about the science of sinkholes and how the team used a variety of geoscience methods to study the NCM sinkhole and plan its remediation.

**Katie Ellison**
Marketing & Communications Manager
National Corvette Museum & NCM Motorsports Park

Katie Ellison joined the National Corvette Museum team in 2009 after serving as Marketing Director of the Bowling Green Area Convention and Visitors Bureau. A graduate of Western Kentucky University and Leadership Bowling Green, Katie serves on the boards of the Professional Marketing Association, Bowling Green Area Lodging Association and The Center for Gifted Studies at WKU.

**Ric Federico, PG, CHMM, HEM**
EnSafe Business Lead and Branch Manager

Ricardo (Ric) Federico graduated from Western Kentucky University in Bowling Green,
Kentucky in 1994 with a B.S. in Geography and an emphasis in karst hydrogeology. Ric has 24 years of environmental consulting experience, the last 17 of them with EnSafe where he serves as the Branch Manager and Business Lead in their Bowling Green, Kentucky office. Ric’s practice specialties include soil and groundwater investigation & remediation; merger and acquisition support including environmental site assessment; vapor intrusion assessment; and brownfields redevelopment. Ric will talk about EnSafe’s primary contribution to the project, which was vetting assessment options and methods, then designing and conducting a karst geophysical survey of the SkyDome collapse area using microgravity. He will discuss challenges – perceptual, physical, and logistical – to project approval and implementation, discuss hurdles along the way, and summarize the results and excellent correlation with the WKU cave survey data.

S. Craig Smith, PE,
Senior Project Manager, Hayward Baker Inc.

Mr. Smith joined Hayward Baker in 2005 as an Area Manager overseeing the geotechnical construction markets in Tennessee and Kentucky. Currently, he is a Senior Project Manager based in the Knoxville, TN office where he manages Hayward Baker’s large and/or high-risk projects throughout the southeastern United States. Mr. Smith’s primary area of focus is in the drilling and grouting sector consisting of micropile installation, anchored retaining walls, landslide repair, structural underpinning, and grouting techniques for ground improvement including karst mitigation.

Prior to joining Hayward Baker, Mr. Smith worked for a large site development contractor overseeing large bulk earth moving projects, landfill construction projects, and landslide repair projects throughout the southeastern United States. Mr. Smith started his career working for a geotechnical design firm specializing in the design of coal tailing impoundments in the eastern coal fields, landslide mitigation design, and performing design work for various Hayward Baker offices.

Mr. Smith is a Geotechnical Engineer with more than 20 years of experience receiving both his B.S. and M.S. degrees from the University of Tennessee Knoxville in 1992 and 1994 respectively.
### Registration Open
Third Floor, Downing Student Union

### Posters on Display
Downing Student Union, Second & Third floors

### Oral Presentations - Saturday morning
Asterisk * denotes student research competition

### Practice Room
DSU 2081
This room is available for speakers to practice their presentations.

### Practice Room
DSU 3004
This room is available for speakers to practice their presentations.

### Agricultural Science - Oral Presentations
DSU 3005
Section meeting follows talks at 11:45

08:00 - Monensin alters the functional and metabolomic profile of rumen microbiota in beef cattle

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Adeyemi</td>
<td>Hank Schweickart</td>
<td>Ibukun Ogunade</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>First Author</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>08:15</td>
<td>A Cyanide Group Reduced Cypermethrin Half-Lives on Cucumber Grown Under Greenhouse Conditions</td>
<td>George Antonious</td>
</tr>
<tr>
<td>08:30</td>
<td>Quantification of tylosin antibiotics and antibiotic resistance genes in cattle waste.</td>
<td>Keerthi Appala</td>
</tr>
<tr>
<td>08:45</td>
<td>Evaluation of Stocking Density in a Live Holding Recirculating System for Food-size Largemouth Bass, Micropterus salmoid</td>
<td>Sujan Bhattarai</td>
</tr>
<tr>
<td>09:00</td>
<td>Rove beetles in blackberry plots bordered by native perennials or pasture and treated with biological insecticides.</td>
<td>Sathya Govindasamy</td>
</tr>
<tr>
<td>09:15</td>
<td>Parental gender preference as a factor in population sustainability</td>
<td>Elmer Gray</td>
</tr>
<tr>
<td>09:30</td>
<td>Yield of zucchini, Cucurbita pepo, grown in various soil amendments</td>
<td>Quinn Heist</td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>First Author</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>09:45</td>
<td>Do Online Shoppers Have Knowledge on Community Supported Agriculture Programs?</td>
<td>Wyatt Lucas</td>
</tr>
<tr>
<td>10:15</td>
<td>Evaluation of drug-resistant Enterobacteriaceae on produce from small farms.</td>
<td>Tavin Marshall</td>
</tr>
<tr>
<td>10:30</td>
<td>Optimizing Non-Phytate Phosphorus in Soybean Meal-Based Diets for Largemouth Bass Micropterus salmoides</td>
<td>Kasondra Miller</td>
</tr>
<tr>
<td>10:45</td>
<td>Assessing the Use of Biochar for Immobilization of Trace Elements in Sewage Sludge</td>
<td>Lusekelo Nkuwi</td>
</tr>
<tr>
<td>11:00</td>
<td>Efficacy of a fertilization solution created with testes extraction and maceration in largemouth bass</td>
<td>Amit Sharma</td>
</tr>
</tbody>
</table>
11:30 - Low-Tech hydroponics for beginning and limited resource farmers

First Author  Co-author  Co-author
Nanaaishat umar  Siddhartha Dasgupta  Richard Bryant
Kentucky State University  Kentucky State University  Kentucky State University

Chemistry: Analytical/Physical - Oral Presentations

Saturday, November 3, 2018  8:00am - 12:00pm

08:00 * - Consumption Profiles of Illicit and Neuropsychiatric Drugs in Urban and Rural Communities Using Sewage Epidemiology

First Author  Co-author
Tara Croft  Bikram Subedi
Murray State University  Murray State University

08:15 - Investigating caffeine levels in water sources in Morehead, Kentucky

First Author  Co-author  Co-author
Brandon VanNess  Melanie West  Sarah Little
Morehead State University  Morehead State University  Morehead State University

08:30 * - Various Tools for Quantifying Diffusion of a Model Analyte Set via Capillary Electrophoresis

First Author
Corbin Arrasmith
Northern Kentucky University

08:45 * - Temporal Changes in Dissolved Calcium Levels in Stream and River Waters in Western Kentucky

First Author  Co-author  Co-author
Adam Martin  Bommanna  Susan Hendricks
Student  Loganathan  Professor

09:00 * - Effect of kappa-carrageenan on the Stability of Oil-in-water Emulsions

First Author
Andrew Ballard
09:30 * - Identifying Fecal Biomarkers of Obesity in Mouse Model Using Proton Nuclear Magnetic Resonance Metabolomics

First Author: Yacine Choutri
Co-author: Paul Voziyan
Berea College: University

Co-author: Donald Stec
Vanderbilt University: Medical Center


First Author: Ryan Lamb
Western Kentucky University: University

Co-author: Matthew Nee
University:

10:00 - Incorporation of metal oxides into a polymer substrate for buoyant photocatalysts

First Author: Lovence Ainembabazi
Western Kentucky University:

10:15 - Electrochemical Method for Fabrication of Metal Nanostructures Across Micron Gap Electrodes

First Author: Krista Riggins
Eastern Kentucky University:

Ecology - Oral Presentations

08:00 - Towards rapid assessment of wetland biological condition using indicator species

First Author: Suneeti Jog
Murray State University:

Co-author: Jason Bried
Murray State University:

Co-author: Tommi Fouts
Northeastern State University:

08:15 - Experts and models can agree on species sensitivity values for wetland assessments

First Author: Jason Bried
08:30 - Verification of a Vegetation Index of Biotic Integrity (KY-VIBI) and a Rapid Wetland Assessment (KY-WRAM) in western KY

First Author
Elizabeth Malloy
Eastern Kentucky University

Co-author
Stephen Richter
Eastern Kentucky University

Co-author
David Brown
Eastern Kentucky University

Co-author
Kelly Watson
Eastern Kentucky University

Co-author
Michelle Cook
Kentucky Division of Water

08:45 - Does increasing food-web stability mediate the effects of cattle grazing in aquatic ecosystems?

First Author
Hannah Moore
Murray State University

Co-author
Howard Whiteman
Murray State University

09:00 - Population Dynamics and Foraging Ecology of Copperheads in the Red River Gorge, KY.

First Author
Josh Hendricks
Eastern Kentucky University

Co-author
Jesse Sockman
Eastern Kentucky University

Co-author
Kyle Muenlich
Eastern Kentucky University

Co-author
Austin Owens
Eastern Kentucky University

Co-author
Stephen Richter
Eastern Kentucky University

09:15 - The Kentucky Arboreal Ant Survey: ant communities among forests and urban greenspaces

First Author
Daniella Prince
University of Louisville

Co-author
Benjamin Adams
Natural History Museum of Los Angeles County

Co-author
Stephen Yanoviak
Department of Biology, University of Louisville

09:30 * - Soil function assessment of urban prairie restoration.

First Author
Sarah Benton
University of Louisville

Co-author
Sarah Emery
Univeristy of Louisville

09:45 - Beaver-mediated restoration in a degraded desert ecosystem

First Author
Melody Feden
Murray State
10:15 - Varying duration periods of the herbivore-associated cue differentially affect fitness in P.lunatus and C.annuum

First Author: Grace Freundlich
University of Louisville
Co-author: Liana Greenburg
Wageningen University
Co-author: Sarah Bissmeyer
University of Louisville
Co-author: Carly Nunamaker
University of Louisville
Co-author: Chris Frost
University of Louisville

10:30 - Assessment of Native Pollinator Habitat Planting Densities and Site Preparation Treatments on Abandoned Agriculture Land

First Author: Louis Ross
Kentucky State University
Co-author: Richard Cristan
Kentucky State University

10:45 - New methods utilized to deter elephant (Loxodonta Africa) from crop raiding in the Kasigau Wildlife Corridor, Kenya

First Author: R. Lynn Von Hagen
Western Kentucky University
Co-author: Bruce Schulte
Western Kentucky University

11:00 - 2018 State of the Resource: Mammoth Cave National Park

First Author: Autumn Turner
Western Kentucky University, Crawford Hydrology Laboratory
Co-author: Lee Anne Bledsoe
Western Kentucky University
Co-author: Chris Groves
Western Kentucky University
Co-author: Cate Webb
Western Kentucky University
Co-author: Rickard Toomey III
National Park Service, Mammoth Cave National Park
Co-author: Bobby Carson
National Park Service, Mammoth Cave National Park
Co-author: Katie Algeo
Western Kentucky University

11:15 * - Impact of season, game fencing, moon phase, and vegetation on activity overlap of ungulate species in Namibia

First Author: Emma Reasoner
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Thermoelectric Properties of Graphene-Carbon Nanotube Aerogels as 'Organic' Energy Harvesters</td>
<td>Romney Meek (Western Kentucky University), Sanju Gupta (Western Kentucky University)</td>
</tr>
<tr>
<td>08:15</td>
<td>High Amplitude variable Active Galactic Nuclei</td>
<td>Dirk Grupe (Morehead State University)</td>
</tr>
<tr>
<td>08:30</td>
<td>Citizen CATE: citizen scientist observations of 2017 total solar eclipse</td>
<td>Richard Gelderman (Western Kentucky University)</td>
</tr>
<tr>
<td>08:45</td>
<td>Nanosecond pulsed laser deposition of Pb thin film on Si (111)</td>
<td>Devon Loomis (Western Kentucky University), Bektur Abdisatarov (Western Kentucky University), Ilhom Saidjafarzoda (Western Kentucky University), Donald Price (Western Kentucky University), Ali Er (Western Kentucky University), Mikhail Khenner (Western Kentucky University)</td>
</tr>
<tr>
<td>09:00</td>
<td>NGC 1566: A Temperamental Changing Look AGN</td>
<td>Rebecca Mikula (Morehead State University)</td>
</tr>
<tr>
<td>09:15</td>
<td>Fabrication of Aluminum Nanoparticles via Pulsed Laser Ablation for Bacterial Deactivation</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>09:30 *</td>
<td>Computer Simulation of Atomic-Scale Defects in Intermetallic Compounds</td>
<td>First Author: Christopher Weaver, Co-author: Matthew Zacate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First Author: Jesse Tapp, Co-author: Dylan Weaver</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First Author: Kemo Jammeh, Co-author: Sylwia Ptasinska, University</td>
</tr>
<tr>
<td>09:45 *</td>
<td>Effects of Plastic Deformation and Tensile Strain on Polycrystalline Solids</td>
<td>First Author: Marissa Walls, Co-author: Jennifer Birriel</td>
</tr>
<tr>
<td>10:15 *</td>
<td>Dependence of Helium Atmospheric Pressure Plasma Jet-Induced DNA Damage on Voltage Pulse Frequency and Irradiation Time.</td>
<td>First Author: Casey Christian, Co-author: Ignacio Birriel, University</td>
</tr>
<tr>
<td>10:30 *</td>
<td>Blue Light and UV Blocking Lenses</td>
<td>First Author: Casey Christian, Co-author: Joshua Qualls, University</td>
</tr>
<tr>
<td>10:45 *</td>
<td>Investigating the Anode Heel Effect at 75kV and 140kV</td>
<td>First Author: Casey Christian, Co-author: Michael Gossman, University</td>
</tr>
<tr>
<td>11:00</td>
<td>Modular Bootstrap Bounds at Finite Central Charge</td>
<td>First Author: Casey Christian, Co-author: Joshua Qualls, University</td>
</tr>
<tr>
<td>11:15 *</td>
<td>Energy Determination in the ISS-CREAM Instrument Using Simulations</td>
<td>First Author: Tyler LaBree, University</td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>First Author</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>11:30</td>
<td>Analyses of Jet measurements in Relativistic Heavy Ion Collisions</td>
<td>Ricardo Santos</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:45</td>
<td>Nylon or Steel?</td>
<td>Tanner Tacket</td>
</tr>
<tr>
<td>13:15</td>
<td>X-ray Diffractometry and Compression of Materials</td>
<td>Hayden Johnson</td>
</tr>
<tr>
<td>13:30</td>
<td>TESS: Initial Results and Follow-Up Work at the University of Louisville</td>
<td>Garrison Turner</td>
</tr>
<tr>
<td>13:45</td>
<td>A look at Swift observations of the highly variable Active Galactic Nucleus RX J0148-2758</td>
<td>Parker Poulos</td>
</tr>
<tr>
<td>14:00</td>
<td>Long term X-Ray and UV monitoring of the Narrow Line Seyfert 1 Galaxy, RXJ2217.9-5941</td>
<td>Alanna Cavins</td>
</tr>
<tr>
<td>14:15</td>
<td>An XMM-Newton Observation of the Galactic Supernova Remnant CTB 1 (G116.9+0.2)</td>
<td>Thomas Pannuti</td>
</tr>
</tbody>
</table>
### 14:30 - Night Sky Quality at Mammoth Cave National Park

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chris Groves</td>
<td>Bobby Carson</td>
<td>Barclay Trimble</td>
<td>Vickie Carson</td>
<td>Dave Spence</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Mammoth Cave National Park</td>
<td>Mammoth Cave National Park</td>
<td>Mammoth Cave National Park</td>
<td>Mammoth Cave National Park</td>
</tr>
<tr>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 14:45 - System Parameters for the Eclipsing B-star Binary BD+11 3569

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wesley Ryle</td>
<td>Stephen Williams</td>
<td>Terri Perrino</td>
<td>Sierra O'Bryan</td>
</tr>
<tr>
<td>Thomas More College</td>
<td>United States Naval Observatory</td>
<td>Thomas More College</td>
<td>Thomas More College</td>
</tr>
</tbody>
</table>

### 15:00 * - Design and Implementation of a Data Processing and Statistical Analysis Tool for the Uniheidron Sky Quality Meter

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zachary Pater</td>
<td>Jennifer Birriel</td>
</tr>
<tr>
<td>Morehead State</td>
<td>Morehead State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

---

Saturday, November 3, 2018 8:00am - 12:00pm

### Physiology and Biochemistry - Oral Presentations

**DSU 2123**

Section meeting follows talks at 10:00

#### 08:00 * - Identification of conserved motifs important for Trm732 function in yeast

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daisy DiVita</td>
<td>Michael Guy</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

#### 08:15 * - Characterization of the Molecular Diversity of Pulmonary Sensory Neurons

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issac Domenech</td>
<td>Mark Krasnow</td>
<td>Yin Liu</td>
</tr>
<tr>
<td>Berea College</td>
<td>Stanford University</td>
<td>Stanford University</td>
</tr>
</tbody>
</table>

#### 08:30 - Graphene oxide-based sensing technology for screening antibiotic resistance genes utilizing zinc finger proteins

<table>
<thead>
<tr>
<th>First Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dat Thinh Ha</td>
</tr>
<tr>
<td>Time</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>08:45</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>09:00</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>09:15</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>09:45</td>
</tr>
</tbody>
</table>
08:00 - Seasonal variation in the communication system of the field cricket Gryllus rubens (Orthoptera: Gryllinae)

First Author: Oliver Beckers
Co-author: Nicholas Norman
University: Murray State

First Author: Jacob Pease
Co-author: Kai Murphey
University: Murray State

First Author: Jacob Pease
Co-author: Kai Murphey
University: Murray State

08:15 - The kinematics of envenomation by the yellow stingray, Urobatis jamaicensis

First Author: Steve Huskey
Co-author: Ruth Hughes
University: University of Notre Dame

Co-author: Kristen Pedersen
University: University of Southern California

08:30 - Effect of sleep loss on cognitive function and baseline plasma corticosterone levels in an arctic-breeding songbird

First Author: Brett Hodinka
Co-author: Noah Ashley
University: Western Kentucky

08:45 - New Discoveries of Relationships in Spider Beetles and Related Families Using Molecular Phylogenetics

First Author: Olivia Gearner
Co-author: Keith Philips
University: Western Kentucky

09:00 * - Heritable Behavioral Tendencies of the African Lion

First Author: Natalie Mercer
Co-author: Milan Lstibárek
College: Czech University of Life Sciences Prague

Co-author: Jan Stejskal
College: Czech University of Life Sciences Prague

Co-author: Shannon Finerty
College: Kentucky Wesleyan

09:15 * - Courtship behavior, communication, and copulation in Tigrosa annnea

First Author: Samuel White
WITHDRAWN - Genealogical history and admixture proportion of tiger salamanders in Black Lake, Mono County, California.

09:45 * - Bioenergetic measurements of macroinvertebrates in northern temperate streams using digital technologies.

First Author
Rachel Prokopius
Northern Kentucky University

Co-author
John Piccolo
Karlstad Universitet

Co-author
Eva Bergman
Karlstad Universitet

Co-author
Larry Greenberg
Karlstad Universitet

Co-author
Denis Lafage
Karlstad Universitet

Co-author
Richard Durstche
Northern Kentucky University

10:15 - Growth and Reproduction of the Bigeye Shiner, Notropis boops

First Author
Matthew Fossett
Morehead State University

Co-author
Jon Eisenhour
Morehead State University

Co-author
David Eisenhour
Morehead State University

10:30 - Canopy Conditions and Light Availability as Predictors of Running Buffalo Clover Population Trajectories

First Author
Jessica King
Eastern Kentucky University

Co-author
Jennifer Koslow
Eastern Kentucky University

10:45 * - Molecular analysis of glyceraldehyde 3-phosphate dehydrogenase genes in Ragweed (Asteraceae).

First Author
Kiana Mattingly
Bellarmine University

Co-author
Robert Day
Bellarmine University

Co-author
Joann Lau
Bellarmine University

Co-author
David Robinson
Bellarmine University

11:00 - A Statistical Approach to Defining the Typical Herbarium

First Author
Maggie Whitson
Northern Kentucky University
### Exhibitors Tables

Third Floor, Downing Student Union

Visit our Exhibitors to find out about career opportunities, graduate schools, and to connect to great services & resources!

---

### Statistics consultations

DSU 3018

Calling all researchers! Take advantage of the experts at UK's Applied Statistics Lab, courtesy of KBRIN! If you have data you're working with now, or if you're still designing a project, let the statistics experts help you sort out your data analysis. Find out more and make an appointment in advance: [https://www.kyscience.org/statistics_consults_at_kas.php](https://www.kyscience.org/statistics_consults_at_kas.php)

---

### Student Competition Awards

Third Floor, Downing Student Union

All day Saturday we'll be announcing student competition winners. Come check the screen by the registration desk to see winners. Student winners, we'll be taking your photos to post on our website.

---

### Past Presidents Lunch & Annual Business Meeting

Cupola Room (inside Fresh Dining Hall)

All KAS members are welcome to this meeting. At this time there are no more lunch tickets available but we are making arrangements for anyone to attend the meeting who wishes to join us.

---

### Oral Presentations - Saturday Afternoon

Asterisk * denotes student research competition

---

### Chemistry: Organic/Inorganic - Oral Presentations

DSU 3007 Section meeting follows talks at 3:00

*First Author*
Junhao Huang  
*Western Kentucky University*

### 13:30 * - Heteroaryl Isocoumarins as Potential Aromatase Inhibitors: Substrate Scope Investigation

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quynh Nguyen</td>
<td>William Renzenbrink</td>
<td>Stephen Ramirez</td>
<td>Lili Ma</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

*Co-author*
William Renzenbrink  
*Northern Kentucky University*

*Co-author*
Stephen Ramirez  
*Northern Kentucky University*

*Co-author*
Lili Ma  
*Northern Kentucky University*

### 13:45 * - Discovery of New Heteroaryl Aromatase Inhibitors through Computer Modeling

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayanav Roy</td>
<td>Matthew Neiser</td>
<td>Stephen Ramirez</td>
<td>Andrew Quillen</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

*Co-author*
Matthew Neiser  
*Northern Kentucky University*

*Co-author*
Stephen Ramirez  
*Northern Kentucky University*

*Co-author*
Andrew Quillen  
*Northern Kentucky University*

*Co-author*
Lili Ma  
*Northern Kentucky University*

### WITHDRAWN - Pyridine N-Oxide Assisted Activation of Alkynes by Visible Light Photo-Redox Catalysis

### 14:15 * - Synthesis and structures of a 3D porous metal-organic framework [Fe(bpc)]

*First Author*
Cristina Throckmorton  
*Western Kentucky University*

### 14:30 * - Synthesis and Biological Evaluation of Heteroaryl Ketones

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Ramirez</td>
<td>Quynh Nguyen</td>
<td>Alexander Rosen</td>
<td>Matthew Neiser</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

*Co-author*
Quynh Nguyen  
*Northern Kentucky University*

*Co-author*
Alexander Rosen  
*Northern Kentucky University*

*Co-author*
Matthew Neiser  
*Northern Kentucky University*

*Co-author*
Ayanov Roy  
*Northern Kentucky University*

*Co-author*
Lili Ma  
*Northern Kentucky University*

### 14:45 * - Synthesizing Cleavable Antibody Drug Conjugates via Solid Phase Organic Synthesis

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael James</td>
<td>Levi Blevins</td>
<td>Ominica Crockett</td>
<td>Elizabeth Thomas</td>
</tr>
<tr>
<td>Berea College</td>
<td>Berea College</td>
<td>Berea College</td>
<td>University of Pikeville</td>
</tr>
</tbody>
</table>

*Co-author*
Levi Blevins  
*Berea College*

*Co-author*
Ominica Crockett  
*Berea College*

*Co-author*
Elizabeth Thomas  
*University of Pikeville*
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
<th>Institution</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:15</td>
<td>Inadvertent local climate modification at a regional university in Kentucky, USA</td>
<td>Donald Yow</td>
<td>Matthew Ruggless</td>
<td>Eastern Kentucky University</td>
<td>Eastern Kentucky University</td>
</tr>
<tr>
<td>13:30</td>
<td>URBAN HEAT AND DEMOGRAPHIC CHANGE: A COMPARATIVE ANALYSIS OF THE LARGEST 100 CITIES OF THE TEMPERATE-FORESTED ECOREGION</td>
<td>Tori Farrow</td>
<td>Jeremy Sandifer</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
</tr>
<tr>
<td>13:45</td>
<td>Analyzing sanitary sewer overflow event response to storm frequency</td>
<td>Christopher Andrew Day</td>
<td></td>
<td>University of Louisville</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>Comparing Sediment Yield of Selected Forest Ecosystems Using SWAT in Bell Watershed, Kentucky</td>
<td>Aman Bhatta</td>
<td>Buddhi Gyawali</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
</tr>
<tr>
<td>14:15</td>
<td>Land cover classification and change detection using remote sensing imagery in Morgan County, Kentucky</td>
<td>Saaruj Khadka</td>
<td>Buddhi Gyawali</td>
<td>Tilak Shrestha</td>
<td>Kentucky State University Kentucky State University</td>
</tr>
<tr>
<td>14:30</td>
<td>How economic geography might have saved the Mammoth Cave Mushroom Company</td>
<td>Katie Algeo</td>
<td></td>
<td>Western Kentucky University</td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td>Observing Boundary Layer Heights over Mountainous Terrain Using Aircraft Vertical Profiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>First Author</td>
<td>Co-author</td>
<td>Co-author</td>
<td>Co-author</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>15:00 -</td>
<td>Mapping Opioid Epidemic in Kentucky’s Counties</td>
<td>Dallas McKinney</td>
<td>Western Kentucky University</td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>13:15 -</td>
<td>Activation of Human Immune Responses by Novel Vaccines for Hepatitis C Virus</td>
<td>Samuel Adams</td>
<td>Northern Kentucky University</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevalence of Dyslipidemia in Young African Americans</td>
<td>Bisola Asaolu</td>
<td>Kentucky State University</td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>13:45 -</td>
<td>Epidemiology of HPV-Associated Cancers: Changing Trends and Future Burden</td>
<td>Yeongha Oh</td>
<td>Berea College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:00 -</td>
<td>Bacterial deactivation by using Graphene quantum dot as an effective photodynamic therapy agent</td>
<td>Ermek Belekov</td>
<td>Western Kentucky University</td>
<td>University Physics and Astronomy Department</td>
<td></td>
</tr>
</tbody>
</table>
14:15 - Effects of alpha & beta-adrenergic receptor blockade upon inflammatory responses & microglia activation to sleep loss.

First Author
Nicholas Wheeler
Western Kentucky University

Co-author
Noah Ashley
Western Kentucky University

10:15 * - A Study of Non-Linearity in a Simple Pendulum

First Author
Ethan Caudill
Morehead State University

Co-author
Jennifer Birriel
Morehead State University

10:30 * - Using Topology to find Copyright Infringement

First Author
Jeremiah Halter

10:45 - From the Hardwood to the Spreadsheet

First Author
Christopher Napier
Morehead State University

11:00 - Dr. Strangelog or: How I Learned to Stop Worrying and Love the Slide Rule

First Author
Dwight Smith
Kentucky Community and Technical College System

11:15 - Additive 3-Choosability of Planar Graphs with Girth 20

First Author
14:30 - Rational Points on Circles and the Birch and Swinnerton-Dyer Conjecture
First Author
Andy Martin
Kentucky State University

14:45 - Applying the Hastings-Metropolis algorithm to chessboard placement problems
First Author
Doug Chatham
Morehead State University

15:00 - An Examination of Discrete Least Squares Approximation Techniques
First Author
Mark Robinson
Western Kentucky University

15:15 - Random Operators and Dynamical Localization
First Author
Kyle Besing
Kentucky Wesleyan College

15:30 - PDE Model for Solid-State Dewetting of a Binary Alloy Thin Film
First Author
Mikhail Khenner
Western Kentucky University

15:45 - A Deeper Look into Open Coverings of the Rationals that do not Cover the Reals
First Author
Justin Trulen
Kentucky Wesleyan College

Saturday, November 3, 2018 1:15pm - 4:00pm
Science Education - Oral Presentations
DSU 3006
Section meeting follows talks at 2:45
13:15 - Death Knell for le Grand K.
13:30 - Why do students leave quantitative STEM majors?
First Author
Hannah Brewer
Morehead State University
Co-author
Wilson Gonzalez-Espada
Morehead State University
Co-author
Robert Boram
Morehead State University

13:45 - Evaluating the effectiveness of a concept-map oriented curriculum in a flipped chemistry classroom
First Author
Bharath Kumar
Midway University

14:00 - PowerPoint Reimagined: Enhancing Lessons to Guide Reasoning, Foster Collaboration, and Promote Active Learning
First Author
Kevin Revell
Murray State University

14:15 - Science Seminar Series of WKCTC: Going Strong for 33 Years
First Author
Karen Hlinka
Kentucky Community and Technical College System

14:30 - Middle School Investigation of Global Climate Change
First Author
Shira Rabin
University of Louisville
Co-author
Bennet Kolb
Jefferson County Public Schools
Co-author
Bronwyn Williams
University of Louisville
Co-author
Adam Stieglitz
University of Louisville
Co-author
Mary Brydon-Miller
University of Louisville

Saturday, November 3, 2018 1:15pm - 4:00pm
Social Sciences: Anthropology/Sociology/Psychology
DSU 2113
Section meetings to follow talks
13:15 * - Haptic Distance Ratios: The Geometry of Space within the Hands

First Author
Sydney Wheeler
Western Kentucky University

Co-author
Farley Norman
Western Kentucky University

Co-author
Lauren Pederson
Western Kentucky University

Co-author
Catherine Dowell
Western Kentucky University

13:30 * - Water Deposits Connection to Decreased Evidence of Burial Practices in Iron Age Britain and Ireland.

First Author
Amanda Lilly
Northern Kentucky University

1:45 - Five minute presentations

First Author
Poster Presenters

Saturday, November 3, 2018  2:00pm - 5:00pm

Physics Teaching Workshop - Ky Association of Physics Teachers
Ogden College Hall Room
1007

This workshop is open to any registered KAS meeting participant.

Quick Links

Annual Meeting Overview
Welcome to Berea College
Registration & Abstract Submission
Keynote Speaker
Statistics Consults at KAS
Local Accommodations
Campus Map & Logistics
Become a 2019 Sponsor
Join us as an Exhibitor or Advertiser
Teacher Workshops Nov 2
Friday Film Screening
Forest Outings
Social Media Photo Contest

2019