

2021

## Keynote Address and Meeting Program

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## KEYNOTE ADDRESS

### Discovering a Lost World of Birds: Fossils in Hawaii's Lava Caves Helen F. James, Ph.D.

Presented 7:00 PM on Friday, April 9



We are extremely happy to welcome Dr. Helen F. James as our keynote speaker. Dr. James is a leading paleo-ornithologist, a fellow of the American Association for the Advancement of Science, and the Curator of Birds for the Smithsonian's National Museum of Natural History where she oversees one of the largest museum collections of birds in the world. She has led or participated in over thirty field expeditions, most of them to collect fossils for the Smithsonian Institution in Washington, DC, and the Bernice P. Bishop Museum in Honolulu. During several decades of research, she and her collaborators discovered over sixty species of extinct fossil birds in the Hawaiian Islands, many of them with odd traits like the inability to fly. She will share the story of these astounding discoveries and how they changed what we think about extinction, as well as how to prevent it.

Born in Hot Springs and raised on Kessler Mountain, just outside of Fayetteville, Arkansas, Dr. James is an alumna of University of Arkansas. As a child, she was captivated by visits to the Smithsonian's National Museum of Natural History in Washington, DC, and while still in her teens, she began volunteering to work behind the scenes in the museum's Paleobiology Department. She was soon drawn into a quest to discover the fossil birds of the Hawaiian Islands, which were all but unknown at the time. Her research has combined stratigraphic excavations of paleontological sites, comparative osteology to interpret fossils, and laboratory analyses of the ancient biomolecules in excavated bones to gain further insight into the past. The lecture will touch on the famous adaptive radiation of Hawaiian Honeycreepers, the wondrous lives of wide-ranging seabirds, and the many extinct island birds that were unable to fly. It will highlight the value of reconstructing ecological histories to help understand and conserve modern ecosystems.

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## SECTION PROGRAM

Due to the meeting going virtual this year, the program is separated into three main sections: undergraduate presentations followed by graduate student presentations, and the faculty presentations. Each section is then further divided by subject area. The presenter(s) is (are) underlined.

### UNDERGRADUATE STUDENT PRESENTATIONS

#### BIOCHEMISTRY/MOLECULAR BIOLOGY

**1. DETERMINATION OF MATING TYPE AND SPECIES OF A NATURAL ISOLATE OF DICTYOSTELIUM USING MOLECULAR TECHNIQUES AND SEXUAL CROSSES**

Harrison Jenkins, University of Arkansas - Fort Smith  
Faculty Mentor: Sandhya Baviskar, University of Arkansas - Fort Smith

**2. SMALL ANTIVIRAL PEPTIDE INHIBITORS AGAINST SARS-COV-2**

Riley Roper, University of Arkansas - Fort Smith  
Faculty Mentor: Mohammad A. Halim, University of Arkansas - Fort Smith

**3. DESIGNING ANTIMICROBIAL PEPTIDES AGAINST THE MAIN PROTEASE OF SARS-COV-2: A MOLECULAR MODELLING APPROACH**

Sydney Du, Cladie B. White, University of Arkansas - Fort Smith  
Faculty Mentors: Archana Mishra, Mohammad A. Halim, University of Arkansas - Fort Smith

**4. ARGININE: GLYCERIN BASED DEEP EUTECTIC SOLVENT AND ITS IMPACT ON PROTEIN STRUCTURE AND DYNAMICS**

Kairy Galvez, University of Arkansas - Fort Smith  
Faculty Mentor: Mohammad A. Halim, University of Arkansas - Fort Smith

**5. THERAPEUTIC APPLICATION OF SCORPION VENOM PEPTIDES AGAINST SARS-COV-2**

Honey Matevia, Harmeet Chohan, University of Arkansas - Fort Smith  
Faculty Mentors: Archana Mishra, Mohammad A. Halim, University of Arkansas - Fort Smith

#### VERTEBRATE BIOLOGY

**6. TURNING UP THE HEAT: THERMAL TOLERANCES OF FISHES IN THE KINGS RIVER, ARKANSAS**

Willow Newman, Chance Garrett, Matthew Gifford, University of Central Arkansas  
Faculty Mentors: Ginny Adams, Reid Adams, University of Central Arkansas

**7. DO FARM PONDS AND SMALL IMPOUNDMENTS INFLUENCE FISH ASSEMBLAGES IN THE BLACK RIVER WATERSHED IN ARKANSAS?**

Grace Davenport, Jennifer Main, George Gavrielides, and Calvin Rezac, University of Central Arkansas  
Faculty Mentors: Ginny Adams and Reid Adams, University of Central Arkansas

**8. DOES GUT LENGTH OF DUSKY STRIPE SHINER LUXILUS PILSBRYI VARY IN RESPONSE TO STREAM DRYING?**

Jessica Rath, Reagan Spinelli, Chance Garrett, University of Central Arkansas  
Faculty Mentors: Ginny Adams, Reid Adams, University of Central Arkansas

**9. DISTRIBUTION AND REPRODUCTION BY THE SWALLOW-TAILED KITE (*ELANOIDES FORFICATUS*) IN ARKANSAS**

Grace Wills, Henderson State University  
Faculty Mentor: Renn Tumilson, Henderson State University

**10. THE DECLINE OF BIRD SPECIES AT JACK MOUNTAIN WILDLIFE MANAGEMENT AREA**

Madison Shankle, Alexis Summerford, Ouachita Baptist University  
Faculty Mentor: Christin Pruett, Ouachita Baptist University

**11. ENERGY CONTENT OF SEEDS OF PALMER'S PIGWEED (*AMARANTHUS PALMERI*) IN THE DIET OF SCALED QUAIL (*CALLIPEPLA SQUAMATA*) IN NEW MEXICO**

Paige Eddington, University of Arkansas at Monticello  
Faculty Mentors: John L. Hunt, University of Arkansas at Monticello; Matthew E. Grilliot, Auburn University at Montgomery; Troy L. Best, Auburn University; Isaac C. Castillo, Faith A. Johnson, University of Arkansas at Monticello

**12. PINE FORESTS ARE AN IMPORTANT HABITAT FOR BREEDING BIRDS AT JACK MOUNTAIN WILDLIFE MANAGEMENT AREA**

Alexis Summerford, Madison Shankle, Ouachita Baptist University  
Faculty Mentor: Christin Pruett, Ouachita Baptist University

#### PLANT BIOLOGY/BIOMEDICAL STUDIES

**13. ASSEMBLY, ANNOTATION, AND EVOLUTION OF THE PLASTOME OF PARASITIC APHYLLON PLANTS**

Taylor Aishman, Hendrix College  
Faculty Mentor: Adam C. Schneider, Hendrix College

**14. EFFECTS OF LATE WINTER/EARLY SPRING FLOODING ON PIN OAK SAPLINGS**

Ashlyn Estes, University of Central Arkansas  
Faculty Mentor: Erin Wiley, University of Central Arkansas

**15. EFFECT OF SOIL MICROBIOME SUCCESSION ON THE PREVALENCE OF ANTIBIOTIC RESISTANCE**

Ethan Moore, Brandon Romero, Hannah Warrington, University of Arkansas - Fort Smith

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Faculty Mentors: Roger Lightner, Jeffrey Shaver, University of Arkansas - Fort Smith

**16. NATURE INSPIRED MATERIALS FOR BIOMEDICAL APPLICATIONS**

Paula Najera-Diaz, Kenia Mendez, University of Arkansas - Fort Smith

Faculty Mentor: Charuksha Walgama, University of Arkansas - Fort Smith

**MUSEUM SCIENCE/BIODIVERSITY**

**17. CURATING AND DIGITIZING THE BRYOPHYTE COLLECTIONS OF THE HENDRIX COLLEGE HERBARIUM**

Grace Capooth, Hendrix College

Faculty Mentor: Adam C. Schneider, Hendrix College

**18. WILDLIFE AMONG US: PRELIMINARY RESULTS FROM THE FIRST TWO SEASONS OF THE CENTRAL ARKANSAS URBAN WILDLIFE PROJECT**

Tristan Hoerschelmann, Lauren L. Berry, Jaclyn S. Reifeiss, Rebecca G. Burks, Hendrix College

Faculty Mentors: Kirsten Bartlow, Christopher R. Middaugh, Kimberly Sparks, Arkansas Game and Fish Commission

**19. COMPARISON OF TICK COLLECTION METHODS**

Ty Say, University of Arkansas - Monticello

Faculty Mentor: Keith Blount, University of Arkansas - Monticello

**20. BIODIVERSITY OF ANTS IN THE OZARKS**

Priscilla Hall, John Brown University

Faculty Mentor: Joel Funk, John Brown University

**CHEMISTRY**

**21. A COMPACT METHOD FOR EASILY CREATING AND TESTING CZERNY-TURNER HIGH-RESOLUTION SPECTROGRAPHS AND ALLOWING QUICK INTERCHANGE OF COMPONENTS**

Thomas Marshall, Harding University

Faculty Mentor: Edmond Wilson, Harding University

**22. METAL OXIDE LEACHING FROM GLASS CULLET USED FOR SHORELINE RESTORATION**

Emily Blitz, Kathryn Echevarria, Julia M. Mathews, University of Arkansas - Fort Smith

Faculty Mentors: Jordan A. Mader, Maurice P. Testa, University of Arkansas - Fort Smith

**23. EXPLORING GREEN SYNTHESIS OF ALDOL REACTIONS USING DEEP EUTECTIC SOLVENTS**

Michael Lee, Bobbi Evans, University of Arkansas - Fort Smith

Faculty Mentors: Jordan A. Mader, Souvik Banerjee, University of Arkansas - Fort Smith

**24. SYNTHESIS, IR SPECTROSCOPY AND MASS SPECTROMETRY INVESTIGATIONS OF GLUTAMINE BASED DEEP EUTECTIC SOLVENT**

Taylor Johnston, University of Arkansas - Fort Smith

Faculty Mentor: Mohammad A. Halim, University of Arkansas - Fort Smith

**25. MENTHOL: ACETIC ACID BASED LOW VISCOSITY DEEP EUTECTIC SOLVENTS**

Paul Gambill, University of Arkansas - Fort Smith

Faculty Mentor: Mohammad A. Halim, University of Arkansas - Fort Smith

**26. IBUPROFEN-MENTHOL BASED THERAPEUTIC DEEP EUTECTIC SYSTEM**

Mary-Kate Wewers, University of Arkansas - Fort Smith

Faculty Mentor: Mohammad A. Halim, University of Arkansas - Fort Smith

**27. GLYCEROL: TYROSINE BASED NATURAL DEEP EUTECTIC SOLVENT: INSIGHTS FROM IR SPECTROSCOPY AND MASS SPECTROMETRY**

Harmeet Kaur Chohan, University of Arkansas - Fort Smith

Faculty Mentor: Mohammad A. Halim, University of Arkansas - Fort Smith

**28. ACIDIC AMINO ACID AND GLYCEROL BASED NATURAL DEEP EUTECTIC SOLVENTS**

Cynthia Montoya, University of Arkansas - Fort Smith

Faculty Mentor: Mohammad A. Halim, University of Arkansas - Fort Smith

**29. DETECTION OF ACTIVE PHARMACEUTICAL INGREDIENTS (APIS) IN DRUGS USING SCREEN PRINTED ELECTRODES**

Matt Boston, University of Arkansas - Fort Smith

Faculty Mentor: Charuksha Walgama, University of Arkansas - Fort Smith

**30. ELECTROCHEMICAL BIOFILMS FOR DRUG METABOLITE SYNTHESIS**

Evan Wittig, University of Arkansas - Fort Smith

Faculty Mentor: Charuksha Walgama, University of Arkansas - Fort Smith

**31. N-IMIDAZOLYL BENZAMIDES FOR THE FIGHT AGAINST MALARIA**

Chloe Cline, Henderson State University

Faculty Mentor: Martin Campbell

**32. PROBING THE INTERACTION OF PESTICIDES WITH THE HUMAN SERUM ALBUMIN USING MOLECULAR DOCKING AND MD SIMULATION**

Jesse Scott, Joseph B. Stubblefield, University of Arkansas - Fort Smith

Faculty Mentors: Sayo O. Fakayode and Archana Mishra, University of Arkansas - Fort Smith

**33. ELECTROCHEMICAL TECHNIQUE TO FABRICATE GLUCOSE BIOSENSOR USING ENZYME EXTRACT FROM CORN**

Kayleigh Amber Rodríguez, Arkansas State University

Faculty Mentor: Anahita Izadyar, Arkansas State University

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ENGINEERING

34. LASER BEAM PROFILER

Gage Miller, Harding University

Faculty Mentor: Edmond Wilson, Harding University

35. OPTICAL TRACKING OF HIGH ALTITUDE BALLOONS

Wade Lamberson, Harding University

Faculty Mentor: Edmond Wilson, Harding University

36. GENERIC ROBOTIC GUIDANCE, NAVIGATION, AND CONTROL CLASSES FOR THE OSAM ARCHITECTURE SIMULATION SYSTEM (OASIS)

Grace Zimmerman, University of Central Arkansas

Faculty Mentors: Jessica S. Friz, Nathan T. Perreau, NASA Langley Research Center

37. ROBOT - AUTONOMOUS NAVIGATION

Ilya Busaev, University of Central Arkansas

Faculty Mentor: William Slaton, University of Central Arkansas

38. AUTOMATED COLOR-DISTINGUISHING ROBOTIC ARM

Ashley Strohmeier, University of Arkansas - Little Rock

Faculty Mentor: Steve Menhart, University of Arkansas - Little Rock

39. STRENGTHENING BEHAVIOR OF 7075 ALUMINUM ALLOY AFTER STRAIN HARDENING VERSUS THAT OF PRECIPITATION HARDENING

John Graham, University of Arkansas - Little Rock

Faculty Mentors: Ashokkumar M. Sharma, Srikanth B. Pidugu, University of Arkansas - Little Rock

GEOSCIENCES

40. USING HIGH-RESOLUTION FIELD PHOTOGRAMMETRY FOR 3D RENDERS AND MODELS OF SILURIAN REEFS IN MICHIGAN'S HIAWATHA NATIONAL FOREST

Preston Liles, Logan Pearson, Samantha Barnett, University of Arkansas - Fort Smith

Faculty Mentors: Maurice P. Testa, University of Arkansas Fort Smith, Erik B. Larson, Shawnee State University

41. PETROGRAPHIC AND BIOSTRATIGRAPHIC ANALYSIS OF A MCKAY BAY MEMBER MID-SILURIAN KNOLL REEF IN MICHIGAN'S UPPER PENINSULA

Logan Pearson, Samantha Barnett, Preston Liles, University of Arkansas Fort Smith

Faculty Mentors: Maurice P. Testa, University of Arkansas - Fort Smith, Erik B. Larson, Shawnee State University

42. DEVELOPMENT OF A STANDARDIZED METHODOLOGY FOR THE COLLECTION AND QUANTIFICATION OF MICROPLASTICS IN FORT SMITH REGIONAL WATERWAY

Matthew Neal, Emily Blitz, Andrew Edmonds, Ian Hattabaugh, Preston Liles, Julia Mathews, Jake Thompson, Jonathan Turco, University of Arkansas - Fort Smith

Faculty Mentors: Maurice Testa, Jordan Mader, University of Arkansas - Fort Smith

MEDICINE & PARASITOLOGY

43. A NUTRITIONAL INTERVENTION TO ATTENUATE UPPER RESPIRATORY TRACT INFECTIONS IN COLLEGIATE DISTANCE RUNNERS

Emily Newberry, University of Central Arkansas

Faculty Mentor: Candice Thomas, University of Central Arkansas

44. IDENTIFICATION OF POTENTIAL SMALL MOLECULE INHIBITORS OF SARS-COV-2 MAIN PROTEASE

Joshua Thammathong, Olivia Coulter, Ramiro Cruz, Ryan Whatcott, University of Arkansas- Fort Smith

Faculty Mentor: Souvik Banerjee, University of Arkansas - Fort Smith

45. DEVELOPMENT OF ER- $\beta$  SELECTIVE AGONISTS FOR THE TREATMENT OF OBESITY AND NON-ALCOHOLIC STEATOHEPATITIS (NASH)

Olivia Coulter, University of Arkansas - Fort Smith

Faculty Mentor: Souvik Banerjee, University of Arkansas - Fort Smith

46. TESTING THE LONG TERM VIABILITY OF ORGANOTYPIC CULTURES OF THE ANTERIOR MOUSE PITUITARY

Samantha Jones, Southern Arkansas University

Faculty Mentor: James Hyde, Southern Arkansas University

47. MAPPING SPATIAL AND TEMPORAL VARIATION IN *Aedes albopictus* PREVALENCE ACROSS ARKANSAS

Alyssa N Jones, Arkansas Tech University

Faculty Mentor: Douglas G Barron, Eric C Lovely, Arkansas Tech University

PHYSICS

48. THE FLUORINO: A LOW-COST, ARDUINO-CONTROLLED FLUOROMETER

Joe Coker, Hendrix College

Faculty Mentor: Julie Gunderson

49. USING DIFFERENTIAL PHOTOMETRY TO STUDY VARIABILITY IN BINARY STAR SYSTEM XZ TAURI

Briana Budnick, University of Central Arkansas

Faculty Mentor: Scott Austin, University of Central Arkansas

50. COMPROMISED FUNCTIONALITY DUE TO CRANIAL RADIATION TO TREAT TUMORS EXPLAINED THROUGH 3D MODELING OF DENDRITIC SNIPPING

Simeon Simmons, University of Central Arkansas

Faculty Mentor: Azida Walker, University of Central Arkansas

51. EFFECTS OF RADIATION ON THE KV1.2 ION CHANNEL

Austin Hall, University of Central Arkansas

Faculty Mentor: Azida Walker, University of Central Arkansas

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**52. EFFECT OF LOW DOSE RADIATION ON THE STRENGTH OF RAT HINDLIMB BONES**

Manling Cheng, University of Central Arkansas

Faculty Mentors: Rahul Mehta, Brent Hill, University of Central Arkansas

**53. FINDING PULSARS – USING COMPUTATIONAL PHYSICS TO EXPLORE UNTAPPED ASTRONOMY DATABASES**

John Singel, University of Central Arkansas

Faculty Mentor: Jeremy Lusk, University of Central Arkansas

**54. A VERSATILE FIBER-FED COMPACT SPECTROGRAPH**

Justin Hajicek, Harding University

Faculty Mentor: Edmond W. Wilson, Jr., Harding University

**GRADUATE STUDENT PRESENTATIONS**

**BIOCHEMISTRY/MOLECULAR BIOLOGY**

**55. INVESTIGATING THE MOLECULAR RESPONSES IN RICE ROOTS DURING INTERACTION WITH PLANT GROWTH-PROMOTING BACTERIA, *BURKHOLDERIA UNAMAE***

John Cook, University of Central Arkansas

Faculty Mentor: Arijit Mukherjee, University of Central Arkansas

**56. INVESTIGATE THE MOLECULAR MECHANISMS BY WHICH PLANT GROWTH-PROMOTING BACTERIA, *AZOSPIRILLUM BRASILENSE*, MEDIATE SALT STRESS**

Zachariah Degon, University of Central Arkansas

Faculty Mentor: Arijit Mukherjee, University of Central Arkansas

**VERTEBRATE ZOOLOGY**

**57. DETERMINATION OF BAT SPECIES' USE OF ARTIFICIAL BARK ENHANCED HABITAT AT SELECT SITES IN NORTH AND CENTRAL ARKANSAS**

Sarah Martin, University of Central Arkansas

Faculty Mentor: M. Victoria McDonald

**MEDICINE**

**58. VITAMIN D: A LONGEVITY VITAMIN?**

Billy Huggins, University of Central Arkansas

Faculty Mentor: Mindy Farris, University of Central Arkansas

**COMPUTER SCIENCE**

**59. HOW PREDICTABLE IS SPACE EXPLORATION?**

Michael Howell, Daniel Berleant, University of Arkansas - Little Rock; Richard Segall, Arkansas State University; Hyacinthe Aboudja, Oklahoma City University; Peng-Hung Tsai -University of Arkansas - Little Rock

**ENGINEERING**

**60. EFFECT OF POWDER ACTIVATED CARBON (PAC) ON CLASS C FLY ASH MODIFIED CONCRETE PROPERTIES**

Sumon Roy, Arkansas State University

Faculty Mentor: Zahid Hossain, Arkansas State University

**61. A STUDY ON FEASIBILITY OF WARM MIX ASPHALT IN ARKANSAS**

Mohammad Najmush, Sakib Oyan, Arkansas State University

Faculty Mentor: Zahid Hossain, Arkansas State University

**62. SEISMIC SITE RESPONSE ANALYSIS IN PERSPECTIVE VIEW OF NORTH-EAST ARKANSAS (NEA)**

MD Rafiue Islam, Arkansas State University

Faculty Mentor: Zahid Hossain, Arkansas State University

**63. EFFECT OF POWDERED ACTIVATED CARBON (PAC) IN FLY ASH ON ALKALI-SILICA REACTIVITY AND SCALING RESISTANCE OF CONCRETE**

Raiyan Chowdhury, Arkansas State University

Faculty Mentor: Zahid Hossain, Arkansas State University

**64. DYNAMIC MODELING OF MULTIPARTICLE ELECTROSTATIC SELF-ASSEMBLY TOWARD TUNABLE SURFACES IN INVERTED DIELECTRIC SYSTEM**

Etee Kawna Roy, Arkansas State University

Faculty Mentor: Brandon Kemp, Arkansas State University

**FACULTY/PROFESSIONAL PRESENTATIONS**

**BIOCHEMISTRY/MOLECULAR BIOLOGY**

**65. LARGE SCALE ANTIVIRAL PEPTIDES SCREENING AGAINST SARS-COV-2**

Mohammad Halim, University of Arkansas - Fort Smith

**VERTEBRATE ZOOLOGY**

**66. DISTAL EXCURRENT DUCTS AND PENILE MORPHOLOGY OF THE UROGENITAL SYSTEM IN THE MISSISSIPPI MUD TURTLE, *KINOSTERNON SUBRUBRUM***

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**HIPPOCREPIS**

Stan Trauth, Arkansas State University (Emeritus); Michael V. Plummer, Harding University (Emeritus)

**67. MORPHOLOGY OF RATHKE'S GLANDS IN THE ALLIGATOR SNAPPING TURTLE, *MACROCHELYS TEMMINCKII* (CHELONIA: CHELYDRIDAE)**

Stan Trauth, Arkansas State University (Emeritus)

**68. INVESTIGATION OF FLUORESCENCE IN SELECTED MAMMALS OF ARKANSAS**

Renn Tumilson, T. L. Tumilson, Henderson State University

**69. DISTRIBUTION AND HISTORY OF THE ROSEATE SPOONBILL (*PLATALEA AJAJA*) IN ARKANSAS**

Renn Tumilson, Grace Wills, Henderson State University

**70. BIRD USAGE OF BLACK MARASMIUS FIBERS AS NEST MATERIAL – TESTING TWO HYPOTHESES**

Ragupathy Kannan, Shayla Smithson, Haris Rana, Jack Jackson, University of Arkansas -Fort Smith

**71. VIRTUAL ORNITHOLOGY—STUDYING BERMUDA PETRELS FROM REMOTE VIA WEBCAMS**

Ragupathy Kannan, Jack Jackson, University of Arkansas - Fort Smith, Bala Chander, Tara Chander, New York

**72. NOVEL REPRODUCTIVE DATA ON PEALIP REDHORSE, *MOXOSTOMA PISOLABRUM***

Chris McAllister, Eastern Oklahoma State College; H.W. Robison, Sherwood, AR; E.T. Woodyard, T.G. Rosser, Mississippi State University; T.J. Fayton, Cornell University

**MUSEUM SCIENCE AND BIODIVERSITY**

**73. AN UPDATED CHECKLIST OF THE SPIDERS (ARACHNIDA: ARANEAE) OF ARKANSAS**

Renn Tumilson, Henderson State University; H. W. Robison, Southern Arkansas University (Emeritus); P. E. Cushing, Denver Museum of Nature and Science; P. R. Dorris, Henderson State University (Emeritus)

**CHEMISTRY**

**74. DEVELOPMENT OF POTENT SMALL MOLECULE AUTOTAXIN/LPARI DUAL INHIBITOR FOR THE TREATMENT OF IDIOPATHIC PULMONARY FIBROSIS**

Souvik Banerjee, Sayo O. Fakayode, University of Arkansas - Fort Smith; Abby L. Parrill, University of Memphis; Derek D. Norman, Shanshan Deng, Sue-Chin Lee, Wei Li, Duane D. Miller, Gabor J. Tigy, UTHSC

**75. SEMI-SYNTHETIC MODIFICATION OF EPIPOLYTHIODIOXOPIPERAZINE ALKALOID ANALOGUES**

Chiraz Soumia Amrine, Arkansas Tech University; Andrew C. Huntsman, The Ohio State University; Joanna E. Burdette University of Illinois at Chicago; Cedric J. Pearce, Mycosynthetix Inc.; James R. Fuchs, The Ohio State University; Nicholas H. Oberlies, University of North Carolina at Greensboro

**76. NATURAL AMINO ACIDS AS PRECURSORS IN TREATMENT OF NEUROINFLAMMATION**

Mariusz Gajewski, Arkansas Tech University

**77. TRANSFORMING AN *IN VITRO* LEAD INTO AN *IN VIVO* TREATMENT FOR NEUROINFLAMMATION**

Mariusz Gajewski, Arkansas Tech University

**78. DISCOVERY OF THE FIRST NON-ATP-COMPETITIVE AURORA B INHIBITOR WITH IMPROVED SELECTIVITY**

Naga Rajiv Lakkaniga, Scripps Research Institute

**GEOSCIENCES**

**79. ALTERNATIVE TOOLS FOR CORRELATING STRATA COMPRISING THE ARKOMA BASIN**

Jacob Grosskopf, Arkansas Tech University

**MEDICINE**

**80. FOSTERING PEER EVALUATION SKILLS IN NURSING STUDENTS**

Lisa DuBose, Arkansas Tech University

**PARASITOLOGY**

**81. *EIMERIA LANCASTERENSIS* (APICOMPLEXA: EIMERIIDAE), THREE NEMATODES (HELIGMOSOMOIDEA: BOEHMIELLIDAE, HELIGMONELLIDAE), AND FLEA (ORCHOPEAS HOWARDI) FROM AN EASTERN FOX SQUIRREL (*SCIURUS NIGER*)**

Chris McAllister, Eastern Oklahoma State College; H.W. Robison, Southern Arkansas University (Emeritus); L.A. Durden, Georgia Southern University; C.M. Whipps, SUNY College of Environmental Science & Forestry; J.A. Hnida, Midwestern University

**82. NEW DISTRIBUTIONAL RECORDS FOR ECTOPARASITES (ACARI: LAELAPIDAE, MYCOPTIDAE) OF THE WOODLAND VOLE, *MICROTUS PINETORUM* (RODENTIA)**

Chris McAllister, Eastern Oklahoma State College; L.A. Durden, Georgia Southern University

**83. NEW GEOGRAPHIC DISTRIBUTIONAL RECORDS FOR TWO ENDOPARASITES (CESTODA, NEMATODA) OF BOBCAT, *LYNX RUFUS* (CARNIVORA: FELIDAE), IN ARKANSAS**

Chris McAllister, Eastern Oklahoma State College; H.W. Robison, Southern Arkansas University (Emeritus); T.G. Rosser, E.T. Woodyard, Mississippi State University