

2009

93rd Annual Meeting, 2009: Program

Academy Editors

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Arkansas Academy of Science

**SECTION PROGRAMS
ORAL PRESENTATIONS**

**SESSION 1: FRIDAY 1:00-2:30. CHAIR: JD SWANSON
BOARD OF TRUSTEES ROOM, ROBSON LIBRARY**

Topics: Molecular Biology, Biophysics, Genetics and Microbiology

1:00

CRITICAL EVALUATION OF BACTERIOPHAGE AS AN ALTERNATIVE TO ANTIBIOTICS IN ANIMAL AND HUMAN MEDICINE

Huff, William E; Huff, Geraldine R; Rath, Narayan C; Donoghue, Annie M. USDA/ARS, University of Arkansas - Fayetteville

1:15

COMPARISON OF BACILLUS CEREUS AND BACILLUS ANTHRACIS INFECTION MODELS AND GLYCOCONJUGATE-INDUCED IMMUNOMODULATION

Scott, Ashley; Lahiani, Mohamed H; Rasol, Aveen; Tarasenko, Olga. University of Arkansas - Little Rock

1:30

DNA SEQUENCE ANALYSIS OF FRESHWATER EUSTIGMATOPHYCEAE, A POTENTIAL SOURCE OF ESSENTIAL FATTY ACIDS

Prior, Sara E; Fawley, Marvin W; Fawley, Karen P. University of Arkansas - Monticello

1:45

THE COG COMPLEX, RAB6, AND COPI DEFINE A RETROGRADE TRAFFICKING PATHWAY ACROSS THE GOLGI APPARATUS EXPLOITED BY THE SUBTILASE CYTOTOXIN

Smith, Richard D; Willett, Rose; Paton, Adrienne W; Paton, James C; Lupashin, Vladimir V. University of Arkansas for Medical Sciences

2:00

DIFFERENTIATING THE ROLES OF PAL 1 AND PAL 2 IN LATE PRICKLE DEVELOPMENT IN RUBUS

Little, Coleman; Jones, Nate; Magie, Ben; Delvasto, Jennyfer; Swanson, JD. University of Central Arkansas

2:15

DSCAM BINDING CAPABILITIES AND MICROSPHERE INTERACTIONS

Caldwell, Jennifer L; Collins, Jesse; Manoharan, Vinothan N. University of Arkansas - Pine Bluff

**SESSION 1: FRIDAY 1:00-2:30. CHAIR: DEBRA L BURRIS
ROOM 129, SMITH-BROYLES SCIENCE BUILDING**

Topics: Physics and Astronomy

1:00

MATTER-ANTIMATTER ASYMMETRY VIA PARTICLES DECAY PROCESSES

Bachri, Abdel G; Kaladi, Babu S. Southern Arkansas University

1:15

ELECTRON FLUID DYNAMICAL EQUATIONS AND IONIZATION RATE FOR BREAKDOWN WAVES PROPAGATING INTO AN IONIZED MEDIUM

Rasul, Noaman; Hemmati, Mostafa; Peden, Robert. Arkansas Tech University

1:30

COMPUTER MODELING OF THE MAGNETICALLY ACTIVE ECLIPSING BINARY V1379 AQUILA

King, John; Robertson, Jeff W. Arkansas Tech University

1:45

OBSERVATIONS OF POTENTIALLY HAZARDOUS ASTEROIDS

Ahms, Jason; Robertson, Jeff W. Arkansas Tech University

2:00

CALIBRATING A PORTABLE FIBER-FED SPECTROGRAPH

Wies, Britney; Robertson, Jeff W. Arkansas Tech University

2:15

ERROR ANALYSIS IN STELLAR ABUNDANCE MODELS USED FOR N-CAPTURE ABUNDANCE DETERMINATIONS

Lusk, Jeremy; Burris, Debra L. University of Central Arkansas

**SESSION 1: FRIDAY 1:00-2:30. CHAIR: JOHN L HARRIS
ROOM 001 BOREHAM BUSINESS BUILDING**

Topics: Marine Biology

1:00

DIEL PATTERNS OF INVERTEBRATE DRIFT AND FEEDING OF TWO SMALL FISHES IN CADRON CREEK

Mitchell, David; Walker, Richard. University of Central Arkansas

1:15

MOVEMENTS AND HABITAT USE OF A LEVIATHAN, ALLIGATOR GAR (ATRACTOSTEUS SPATULA): INITIAL PROGRESS AND PLANS

Kluender, Edward R; Lewis, Lindsey; Adams, S Reid. University of Central Arkansas

1:30

FOOD HABITS OF SYMPATRIC SPOTTED (LEPISOSTEUS OCULATUS) AND SHORTNOSE (LEPISOSTEUS PLATOSTOMUS) GAR DURING FLOODING OF AN ARKANSAS RIVER TRIBUTARY

Walker, Richard H; Benton, Justin; Inebnit, Tommy; Adams, Reid. University of Central Arkansas

1:45

SPECIES RICHNESS, DISTRIBUTION, AND RELATIVE ABUNDANCE OF FRESHWATER MUSSELS (BIVALVIA: UNIONIDAE) OF THE BUFFALO NATIONAL RIVER, ARKANSAS

Matthews, Mickey W; Usrey, Faron; Hodges, Shawn W; Harris, John L; Christian, Alan D. Arkansas State University

2:00

UNIONIDA (MOLLUSCA: MARGARITIFERIDAE, UNIONIDAE) IN ARKANSAS, THIRD STATUS REVIEW

Harris, John L; Posey II, William R; Davidson, Chris L; Farris, Jerry L; Oetker, Susan R; Barnett, M Scott; Martin, HC; Matthews, MW; Seagraves, JH; Wentz, NJ; Winterringer, R; Osborne, C; Christian, Alan D. Arkansas State University, Arkansas Game and Fish Commission, U.S. Fish and Wildlife Service, Arkansas Department of Environmental Quality, Ecological Conservation Organization, Ecological Specialists, Inc.

2:15

A QUALITATIVE FRESHWATER MUSSEL SURVEY OF THE SOUTH FORK SPRING RIVER, MISSOURI AND ARKANSAS

Martin, Holly C; Harris, John L; Christian, Alan D. Arkansas State University

**SESSION 1: FRIDAY 1:00-2:30. CHAIR: ANTHONY K GRAFTON
ROOM 133, WALKER HALL**

Topic: Chemistry

1:00

FLIPPING THE GENERAL CHEMISTRY CLASSROOM: METHOD AND APPLICATION

Grafton, Anthony K. Lyon College

Meeting Report

- 1:15**
FORTIFICATION OF GOAT'S MILK YOGHURT WITH WHEY PROTEIN CONCENTRATE AND TRI-CALCIUM CITRATE: CHEMICAL, PHYSICAL AND ORGANOLEPTIC EVALUATION
Zahoor, Tahir; Iqbal, Arshad; Kanwal, Shuja; Hossain, M Zakir; Umair, Bajwa A. University of Agriculture - Faisalabad, University of Arkansas - Little Rock
- 1:30**
MICROENCAPSULATION OF CUMENE HYDROPEROXIDE AND ITS EFFECT ON FRONTAL POLYMERIZATION SYSTEMS
McFarland, Brian H; Popwell, Sam; Pojman, John A. University of the Ozarks
- 1:45**
HYDROGEN PRODUCTION BY STEAM-REFORMING OF ETHANOL OVER SUPPORTED COBALT AND COBALT-ZINC CATALYSTS
Kazi, Abul B. University of Arkansas - Pine Bluff
- 2:00**
ATOMIC FRACTURE MECHANISM OF GRAPHENE SHEET
Terdalkar, Sachin S; Zhang, Sulin L; Rencis, Joseph J. University of Arkansas - Fayetteville
- SESSION 2: FRIDAY 3:00-4:30. CHAIR: JAMES M STEWART
BOARD OF TRUSTEES ROOM, ROBSON LIBRARY
Topic: Botany and Ecology**
- 3:00**
DETERMINATION OF BENTHIC SOIL CONDITIONS USING NEMATODES
Matute, Moluwa, M; Perschbacher, Peter, M. University of Arkansas - Pine Bluff
- 3:15**
EFFECT OF SALT ON SEVERAL GENOTYPES OF GOSSYPIUM (COTTON)
Tiwari, Rashmi S; Stewart, James M. University of Arkansas - Fayetteville
- 3:30**
EFFECT OF HIGH TEMPERATURE ON POLLEN TUBE GROWTH AND ENERGETICS IN THE COTTON PISTIL
Snider, John L; Oosterhuis, Derrick M; Skulman, Briggs W; Kawakami, Eduardo M; Storch, Diana K. University of Arkansas - Fayetteville
- 3:45**
THE FLOWERING WOODY FLORA OF LOGOLY STATE PARK
Shaw, Jesse C; Smith, Thomas; Erickson, Ray; Baker, Claude. Southern Arkansas University
- 4:00**
PINE STRAW RAKING AND FERTILIZER SOURCE IMPACTS NITROGEN MINERALIZATION IN A LOBLOLLY PINE (PINUS TAEDA) PLANTATION
Ellum, Keith A; Liechty, Hal O; Blazier, Michael A. University of Arkansas - Monticello, Louisiana State University
- 4:15**
IS WHALE WATCHING A THREAT TO ENDANGERED ORCINUS ORCA?
Wakefield, Timothy S; Otis, Robert E. John Brown University
- SESSION 2 FRIDAY 3:00-4:30. CHAIR: DANIEL A BULLOCK
ROOM 129, SMITH-BROYLES SCIENCE BUILDING
Topic: Physics**
- 3:00**
HEAT ASSISTED ELECTRON BEAM WRITING OF POLYCRYSTALLINE NANODOTS
Newton, Benjamin S; Naseem, Hameed; Abu-Safe, Husam. University of Arkansas - Pine Bluff
- 3:15**
STUDY BIOLOGICAL NANO-PARTICLES USING OPTICAL TECHNIQUES
Newton, Sarah E; Oliver, William F. University of Arkansas - Pine Bluff, University of Arkansas - Fayetteville
- 3:30**
QUANTUM DOT ABLATION USING A SCANNING TUNNELING MICROSCOPE PROBE
Bullock, Daniel A; Mortazavi, Mansour. Arkansas Tech University, University of Arkansas - Pine Bluff
- 3:45**
COMPUTER DIGITIZATION FOR TARGET DETECTION USING MICROWAVE IMAGING
Crain, Stephen G; El-Shenawee, Magda. University of Arkansas - Fayetteville
- 4:00**
TRAVEL-TIME VARIABILITY OF OCEAN-ACOUSTIC RAYS
Broughton, Stephen T; Vera, Michael. University of Southern Mississippi
- 4:15**
LAND USE/LAND COVER CLASSIFICATION PROJECT: A COMPARISON OF PIXEL-BASED VERSUS OBJECT-BASED METHODOLOGIES
Riggan Jr., Norman D; Weih Jr., Robert C. University of Arkansas - Monticello
- SESSION 2: FRIDAY 3:00-4:30. CHAIR: DAVID JAMESON
ROOM 001 BOREHAM BUSINESS BUILDING
Topic: Marine Biology**
- 3:00**
DISTRIBUTION AND POPULATION CHARACTERISTICS OF WALLEYE IN THE LOWER ELEVEN POINT RIVER, ARKANSAS
Johnson, Ronald L; Henry, Sam D; Barkley, Sam W. Arkansas State University
- 3:15**
PERSISTENCE OF LARGEMOUTH BASS ALLELES IN AN ARKANSAS LAKE STOCKED WITH FLORIDA BASS
Allen, Ryan; Johnson, Ronald L. Arkansas State University
- 3:30**
LENGTH AT AGE AND CONDITION FOR BASS RELATIVE TO PHENOTYPE FOR SOUTHERN ARKANSAS RESERVOIRS
Allen, Ryan; Cato, Christopher; Dennis, Colton; Johnson, Ronald L. Arkansas State University
- 3:45**
SPATIAL DISTRIBUTION OF YELLOW GRUB IN SMALLMOUTH BASS OF CROOKED CREEK AS DETERMINED BY METACERCARIAL CYST COUNTS IN THE GILL-MOUTH SITES
Daly Sr., James J; Almond, James. University of Arkansas for Medical Sciences
- 4:00**
SCREENING FOR YELLOW GRUB IN POND-RAISED CATFISH BY COUNTING CYSTS IN VISIBLE ANATOMICAL SITES
Singleton, Jeurel; Daly Sr., James J; Keller, Randal J. University of Maryland - Eastern Shore, University of Arkansas for Medical Sciences, Murray State University
- 4:15**
NEW GEOGRAPHIC DISTRIBUTION RECORDS FOR THREE SPECIES OF NOTROPIS (CYPRINIFORMES: CYPRINIDAE) FROM LARGE RIVERS OF ARKANSAS
McAllister, Chris T; Layher, William G; Robison, Henry W; Buchanan, Thomas M. RapidWrite, Layher BioLogics RTEC, Inc., Southern Arkansas University, University of Arkansas - Fort Smith

Arkansas Academy of Science

**SESSION 2 FRIDAY 3:00-4:30. CHAIR: STANLEY E TRAUTH
ROOM 133, WALKER HALL
Topics: Herpetology, amphibians**

**3:00
COMPARATIVE UROGENITAL ANATOMY OF NORTH
AMERICAN MALE COLUBROID SNAKES**

Trauth, Stanley E. Arkansas State University

**3:15
DOES HABITAT QUALITY AFFECT POPULATION DENSITIES
OF AMERICAN ALLIGATORS (ALLIGATOR MISSISSIPPIENSIS)
IN SOUTHWEST ARKANSAS?**

Smith, Geoff D; Dinkelacker, Stephen A. University of Central Arkansas

**3:30
DEMOGRAPHIC TRAITS OF WESTERN CHICKEN TURTLES
(DEIROCHELYS RETICULARIA MIARIA) IN CENTRAL
ARKANSAS**

Hilzinger, Nathanael L; Dinkelacker, Stephen. University of Central Arkansas

**3:45
BUFO FOWLERI ALTERS ITS ATTRACTION TO LIGHT IN THE
PRESENCE OF A POTENTIAL PREDATOR**

Wrench, Zachary C; Mills, Nathan E. Harding University

**4:00
COMMON GROUND SKINK FOUND ALIVE IN TALONS OF
JUVENILE EASTERN BLUEBIRD**

Freeman-Nelson, Kellie J; Risch, Thomas. Arkansas State University

**SESSION 3: SATURDAY 9:00-10:30. CHAIR: THOMAS SMITH
BOARD OF TRUSTEES ROOM, ROBSON LIBRARY
Topics: Zoology and ecology**

**9:00
CATERPILLARS AND KATYDIDS: DO THEIR CANAL-CUTTING
BEHAVIORS FACILITATE HOST-RANGE EXPANSION?**

Dussourd, David E. University of Central Arkansas

**9:15
RANGE EXTENSION OF THE SEMINOLE BAT IN ARKANSAS**

Risch, Thomas S; Klotz, Tracy L. Arkansas State University

**9:30
THE IMPACT OF AIR POLLUTION ON AEROPHYTIC ALGAE
AND SLIME MOLDS FROM TWO SITES IN COLORADO**

Smith, Thomas; Stephenson, Steve; Nelson, Rodney K; Nelson, Lynda. Southern Arkansas University

**9:45
REVISED ARKANSAS ALGAE AND NEW ADDITIONS**

Smith, Thomas. Southern Arkansas University

**10:00
ALGAL EXTREMOPHILES FROM HOT SPRINGS NATIONAL
PARK, HOT SPRINGS, ARKANSAS**

Smith, Thomas; Manoylov, Kalina; Packard, Anne. Southern Arkansas University

**10:15
THE EFFECT OF LIGNITE ON PHASEOLUS VULGARIS PLANT
DEVELOPMENT**

Smith, Thomas; Banks, Surya; Narula, Nitish. Southern Arkansas University

**SESSION 3 SATURDAY 9:00-10:30. CHAIR: ANWAR A BHUIYAN
ROOM 129, SMITH-BROYLES SCIENCE BUILDING
Topics: Physical and Inorganic Chemistry**

**9:00
SYNTHESIS AND CHARACTERIZATION OF HOMOLEPTIC AND
HETEROLEPTIC RUTHENIUM POLYPYRIDINE COMPLEXES**

Wade, Christina; Kudo, Shotaro; Davis, Robby F; Bhuiyan, Anwar A. Arkansas Tech University

**9:15
SYNTHESIS OF $[(\eta^6\text{-P-CYMENE})\text{RU}(9\text{-ATSC})\text{CL}]\text{PF}_6$ AND ITS
INTERACTION WITH HUMAN SERUM ALBUMIN (9-ATSC = 9-
ANTHRALDEHYDE THIOSEMICARBAZONE)**

Beckford, Floyd; Shalowski, Michael. Lyon College

**9:30
MAGNETIC FIELD CONTROLLED SPRAY DEPOSITION OF
NICKEL INK TO FORM ELECTRICALLY CONDUCTIVE
CONTACT PATTERNS – PART I. USE OF AN ELECTROMAGNET**

Sattler, Michael; Engelken, Robert; Felizco, Frederick M; Hickerson, Alan; Thapa, Shyam; Jacobs, Tom. Arkansas State University

**9:45
MAGNETIC FIELD CONTROLLED SPRAY DEPOSITION OF
NICKEL INK TO FORM ELECTRICALLY CONDUCTIVE
CONTACT PATTERNS – PART II. RESULTS WITH A
PERMANENT MAGNET AND WITH NO MAGNETIC FIELD**

Felizco, Frederick M; Engelken, Robert; Sattler, Michael; Hickerson, Alan; Thapa, Shyam. Arkansas State University

**10:00
FURTHER DEVELOPMENTS IN HIGH TEMPERATURE
CHEMICAL BATH DEPOSITION OF INDIUM (III) SULFIDE
FILMS FROM ORGANIC SOLUTIONS**

Hickerson, Alan; Engelken, Robert; Sattler, Michael; Felizco, Frederick M; Thapa, Shyam; Chaudhury, Zariff; Karabacak, Tansel; Seo, Hyewon; Jakobs, Tom; Ewing, Barret. Arkansas State University, University of Arkansas - Little Rock, InvoTek, Inc.

**SESSION 3: SATURDAY 9:00-10:30. CHAIR: JOYCE HARDIN
ROOM 001 BOREHAM BUSINESS BUILDING
Topic: Birds**

**9:00
RESPONSE OF AVIAN POPULATIONS TO WOODLAND
RESTORATION IN THE OZARK MOUNTAINS, ARKANSAS**

Chang, Helen; McClung, Maureen R. University of Arkansas - Fayetteville

**9:15
TWO NEW BIRDS FOR ARKANSAS PLUS COMMENTS ON THE
FORK-TAILED FLYCATCHER AND CLARIFYING OTHER
ARKANSAS RECORDS**

James, Douglas A; Neal, Joseph C; Smith, Kimberly G; Shepherd, William M; Mills, Charles. University of Arkansas - Fayetteville

**9:30
ADVENT, DISPERSAL, AND CURRENT STATUS OF THE EXOTIC
EURASIAN COLLARED-DOVE (STREPTOPELIA DECAOCTO) IN
ARKANSAS**

Dodd, Alena; Fielder, Mike; Kannan, Ragupathy. University of Arkansas - Fort Smith

**9:45
HOUSE SPARROWS REDUCE NESTING SUCCESS OF CLIFF
SWALLOWS IN WESTERN ARKANSAS**

Leasure, Douglas R; Kannan, Ragupathy; James, Douglas A. University of Arkansas - Fort Smith, University of Arkansas - Fayetteville

Meeting Report

10:00

NUTRITIONAL IMMUNOMODULATION AS AN APPROACH TO DECREASING THE NEGATIVE EFFECTS OF STRESS IN POULTRY PRODUCTION

Huff, Geraldine R; Huff, William E; Rath, Narayan C. USDA/ARS, University of Arkansas - Fayetteville

10:15

PROTEOMIC CHANGES IN TIBIAL HEAD CARTILAGE OF CHICKENS WITH TIBIAL DYSCHONDROPLASIA, A METABOLIC SKELETAL DISEASE

Rasaputra, Komal S; Liyanage, Rohana; Lay, Jackson O; Rath, Narayan C. University of Arkansas - Fayetteville

SESSION 3: SATURDAY 9:00-10:30

CHAIR: MOLUWA M MATUTE, ROOM 133, WALKER HALL

Topics: Insects and arthropods

9:00

ENDANGERED NICTOPHORUS AMERICANUS PREFER DISTURBED SUCCESSIONAL COMMUNITIES AT MILITARY INSTALLATION IN WESTERN ARKANSAS

Leasure, Douglas R; Garner, Kristine A. Fort Chaffee Maneuver Training Center, University of Arkansas - Fort Smith

9:15

A PRELIMINARY REPORT ON INSECTS INHABITING THE BURROWS OF BAIRD'S POCKET GOPHER IN ARKANSAS

Kovarik, Peter W; Connior, Matthew B; Chordas III, Steven W; Robison, Henry W; Guenther, Idun; Skelley, Paul E. Columbus State Community College, Arkansas State University, Ohio State University, Southern Arkansas University, Florida Department of Agriculture and Consumer Services

9:30

RECENT COLLECTIONS AND ADDITIONAL RECORDS OF COLLEMBOLA FROM ARKANSAS CAVES

Slay, Michael E; Graening, GO. The Nature Conservancy, California State University

9:45

NEW STATE DISTRIBUTIONAL RECORDS OF ANTS COLLECTED IN 2008

General, David M; Thompson, Lynne C. University of Arkansas - Monticello

10:00

YOU FOUND THOSE "BUGS" IN YOUR BACKYARD, HERE IN CLARKSVILLE? NO WAY?

Chordas III, Stephen W; Kremers, Joe. Ohio State University

POSTER PRESENTATIONS

1. RESIDUAL EFFECTS ON THE ANT COMMUNITY OF 2 HARVESTING TREATMENTS APPLIED 12-YEARS-EARLIER IN A PINE-HARDWOOD FOREST IN SOUTHEASTERN ARKANSAS

Thompson, Lynne C; General, David M. University of Arkansas - Monticello

2. LIFESTYLE INFLUENCES ON BODY MASS INDEX

Boumtje, Perre A; Black, Viktoriya A. Southern Arkansas University

3. LIPID PRODUCTION IN ALGAE AS A BIO-FUEL SOURCE

Narula, Nitish; Smith, Thomas. Southern Arkansas University

4. PRELIMINARY CHECKLIST OF VASCULAR FLORA OF COLUMBIA COUNTY, ARKANSAS

Logan, LA; Smith, Thomas; Winstead, Joe. Southern Arkansas University

5. PRELIMINARY CHECK-LIST OF VASCULAR FLORA OF LAKE COLUMBIA, COLUMBIA COUNTY, ARKANSAS

Logan, LA; Smith, Thomas; Baker, Claude. Southern Arkansas University

6. ALGAE OF LAKE COLUMBIA, COLUMBIA COUNTY, ARKANSAS

Bryan, Brynne; Smith, Thomas. Southern Arkansas University

7. SILVER CITRATE - A NOVEL TOPICAL ANTIMICROBIAL?

Durham, April; Hug, Amber; Yeboah, George; Atchley, Daniel. Harding University

8. ASSESSING THE "HEALTH" OF SAGER CREEK THROUGH WATER CHEMISTRY AND MACROINVERTEBRATE POPULATIONS

Caldwell, Andrew; Colip, Jason; Fegel, Melanee; Flores, Kristin; Hallenbeck, Josh; Meng, David; Mitskevich, Mary; Oswald-Bauer, Teal; Wakefield, Timothy. John Brown University

9. THE USE OF NATURAL POLYMERS FOR SOIL RECLAMATION

James, Tony L; Pinelo, Laura F; Watkins, Kayla, Saito, Chris, Lack, Jessica, Shelton, James; Love, Ebony; Bailey, Brittany; Benjamin, Earl; Benjamin, Ellis. Arkansas State University, Illinois Wesleyan University

10. GLYCOCONJUGATE STIMULATE BACILLUS ANTHRACIS STERNE SPORES KILLING INDEPENDENTLY FROM RACE OR GENDER

Lahiani, Mohamed H; Scott, Ashley; Rasol, Aveen; Saheb, Entsar; Alkarakooly, Zeiyad; Tarasenko, Olga. University of Arkansas - Little Rock

11. GLYCOCONJUGATE STIMULATE BACILLUS ANTHRACIS STERNE SPORES AND TOXINS KILLING

Rasol, Aveen H; Lahiani, Mohamed H; Scott, Ashley; Saheb, Entsar; Alkarakooly, Zeiyad; Tarasenko, Olga. University of Arkansas - Little Rock

12. EFFECT OF GLYCOCONJUGATES ON VIABILITY OF MACROPHAGES BY REDUCING LACTATE DEHYDROGENASE PRODUCTION AGAINST BACILLUS SPORES AND TOXINS

Alkarakooly, Zeiyad; Rasol, Aveen; Saheb, Entsar; Lahiani, Mohammed H; Scott, Ashley; Tarasenko, Olga. University of Arkansas - Little Rock

13. ENHANCE MACROPHAGES NITRIC OXIDE PRODUCTION THAT PROMOTE KILLING BACILLUS ANTHRACIS STERNE STRAIN SPORES AND TOXINS BY USING GLYCOCONJUGATES

Saheb, Entsar J; Scott, Ashley; Rasol, Aveen; Alkarakooly, Zeiyad; Lahiani, Mohammed H; Tarasenko, Olga. University of Arkansas - Little Rock

14. THE EFFECT OF HIGH TEMPERATURE ON IN VIVO POLLEN TUBE GROWTH, CALCIUM LEVELS, ANTIOXIDANT RESPONSE, AND SUPEROXIDE PRODUCTION IN THE COTTON PISTIL

Snider, John L; Oosterhuis, Derrick M; Skulman, Briggs W; Kawakami, Eduardo M; Storch, Diana K. University of Arkansas - Fayetteville

15. MODELING THE INTERNAL STRUCTURE OF THE BREAST

Greenlee, Jordan D; El-Shenawee, Magda. University of Arkansas - Fayetteville

16. EFFECTS OF CRAYFISH DENSITY ON BENTHIC PERIPHYTON

Banks, Brandon T; Ludlam, John P; Magoulick, Daniel D. University of Arkansas - Fayetteville

17. DISTRIBUTION AND ECOLOGY OF THE ASSEMBLAGES OF PROTOSTELOID AMOEBAS ASSOCIATED WITH MAJOR VEGETATION TYPES IN BIG BEND NATIONAL PARK, USA

Ndiritu, George G; Stephenson, Steven L; Spiegel, Frederick W. University of Arkansas - Fayetteville

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18. ASSESSMENT OF CHINQUAPIN (CASTANEA OZARKENSIS) IN OZARKS NORTHWEST ARKANSAS

Onduso, Francis N; Paillet, Frederick L; Stephenson, Steven L. University of Arkansas - Fayetteville

19. STUDYING THE MYXOMYCETE-BRYOPHYTE RELATIONSHIP

Bates, Amanda; Doss, Robin; Rojas, Carlos; Stephenson, Steven L. University of Arkansas - Fayetteville

20. BIOGEOGRAPHY OF MYXOMYCETES IN HIGH-ELEVATION AREAS OF THE NORTHERN NEOTROPICS

Rojas, Carlos; Stephenson, Steven L. University of Arkansas - Fayetteville

21. FLOW CYTOMETRY ANALYSIS OF MERCURY AFFECTED B CELL ACTIVATION

Weigand, Kara; Rowley, Ben. University of Central Arkansas

22. USE OF ANALYTICAL FLOW CYTOMETRY REGARDING THE EFFECTS OF MERCURY ON T-CELL SIGNAL TRANSDUCTION

Reno, J Leigh; Rowley, Ben. University of Central Arkansas

23. EFFECTS OF ATRAZINE AND NITRATE ON HYALLELA AZTECA (AMPHIPODA) IN LABORATORY EXPOSURES

Pandey, Ram B; Adams, Ginny, L; Warren, Laurie University of Central Arkansas

24. ANALYSIS OF B-CELL ANTIBODY GENE SEGMENT USE IN RESPONSE TO MERCURY TREATMENT

Clarke, Heather, J. University of Central Arkansas

25. BEHAVIORAL AND FUNCTIONAL ANALYSIS OF CAF4 IN SACCHAROMYCES CEREVISIAE

Seiter, Jacob L; Wilkins, Annette; Naylor, Kari K. University of Central Arkansas

26. STUDYING THE DICTYOSTELIUM DISCOIDEUM MITOCHONDRIAL FISSION PROCESS TO UNDERSTAND THE EVOLUTIONARY LINK BETWEEN EUKARYOTES

Apata, LaRhonda; Turbeville, Dean; Naylor, Kari K. University of Central Arkansas

27. CLONING BY YEAST GAP REPAIR TO DETERMINE THE DIFFERENT FUNCTIONS OF THE HOMOLOGOUS PROTEINS MDV1 AND CAF4

Allen, Justin; Huett, Elizabeth; Naylor, Kari K. University of Central Arkansas

28. DISTRIBUTION AND FUNCTION OF GIRDLING BY CATERPILLARS OF PROMINENT MOTHS (LEPIDOPTERA: NOTODONTIDAE)

Ganong, Carissa N; Dussourd, David E. University of Central Arkansas

29. DO CARDENOLIDES AND PYRROLIZIDINE ALKALOIDS PROTECT EGGS OF THE MONARCH, DANAUS PLEXIPPUS?

Wright, Justin D; Dussourd, David E. University of Central Arkansas

30. WILL GIBBERELIC ACID PROMOTE EARLY FLOWERING IN IMPORTANT PLANTS OF INTEREST?

Branaman, Tatum J; Cauldwell, John W; Swanson, JD. University of Central Arkansas

31. EXAMINATION OF ALLIGATOR MISSISSIPPIENSIS POPULATIONS IN ARKANSAS FOR MULTIPLE PATERNITY

Knox, Nicole E; Swanson, JD. University of Central Arkansas

32. THE TISSUE CULTURE AND TRANSFORMATION OF RUBUS

Gates, Nadine; Kayla, Parker; Swanson, JD. University of Central Arkansas

33. IDENTIFYING STAGE ONE PRICKLE DEVELOPMENT GENES

Kellogg, Allicia A; Thompson, Meghan N; Swanson, JD. University of Central Arkansas

34. CHARACTERIZING THE VARIABILITY OF CHEMICAL PROPERTIES OF SOIL MAPPED AS AMY SILT LOAM SOILS IN SOUTHEASTERN ARKANSAS

Bhandari, Bika; Ficklin, Robert L. University of Arkansas - Monticello

35. MICROWAVE ASSISTED SYNTHESIS OF RUTHENIUM-DMSO COMPLEXES

Harvey, Amanda; Chui, Shengkuei; Snell, Rian; Draganjac, Mark; Benjamin, Ellis. Arkansas State University

36. TGA AND DTA STUDIES OF SELECTED RU-DMSO COMPLEXES

Chui, Shengkuei; Draganjac, Mark. Arkansas State University

37. MODIFICATION OF THALIDOMIDE FOR IMPROVED BIOLOGICAL ACTIVITY AND VISUALIZATION

Benjamin, Ellis; James, Tony; Bailey, Brittany; Watkins, Kayla; Saito, Christopher; Lack, Jessica; Shelton, James; Hutson, Shannon; Bailey, Brittany; Benjamin, Earl. Arkansas State University

38. DEVELOPMENT OF METAL PHOTOSENSORS IN SOL GEL MATRIXES

Bailey, Brittany; James, Tony; Watkins, Kayla; Saito, Christopher, Lack, Jessica; Shelton, James; Love, Ebony; Benjamin, Earl; Benjamin, Ellis. Arkansas State University

39. ATOMIC FRACTURE MECHANISM OF GRAPHENE SHEET

Terdalkar, Sachin S; Zhang, Sulin L; Rencis, Joseph J. University of Arkansas - Fayetteville

40. E-85 VS. REGULAR GASOLINE: EFFECTS ON ENGINE PERFORMANCE, FUEL EFFICIENCY, AND EXHAUST EMISSIONS

Steinhaus, Jordan W; Johnson, Donald M; Wardlow, George W. University of Arkansas - Fayetteville

41. LIQUID-PHASE NMR STUDIES OF LACTOFERRICIN PEPTIDE

Brown, Joshua; Greathouse, Denise. University of Arkansas - Fayetteville

42. SYNTHESIS OF IRON COMPLEXES OF N-CONFUSED TETRAPHENYLPORPHYRINS

Flowers, Maureen; Monts, Deidre; Sanders, Donald; Watson, Charles T. University of Arkansas - Fort Smith

43. ACCURACY/PRECISION ASSESSMENT OF RECREATIONAL AND MAPPING GRADE GPS RECEIVERS

Weih, Robert C; Gilbert, Michael; Cross, Jack; Freeman, David. University of Arkansas - Monticello, Eagle Forestry Services, Inc.

44. HETEROGENEITY OF SOIL PHYSICAL PROPERTIES WITHIN ONE PHASE OF AMY SERIES SOILS

Ficklin, Robert L; Bhandari, Bikash. University of Arkansas - Monticello