

**MISSISSIPPI  
ACADEMY OF SCIENCES**



**SEVENTY-NINTH ANNUAL MEETING**

**February 26-27, 2015**

**University of Southern Mississippi Thad Cochran Convention Center  
Hattiesburg, MS**

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# Journal of the Mississippi Academy of Sciences

Volume 60

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Number 1



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## GENERAL SCHEDULE

### MISSISSIPPI ACADEMY OF SCIENCES Seventy-Ninth Annual Meeting February 26-27, 2015

#### WEDNESDAY, FEBRUARY 25, 2015

<u>TIME</u>	<u>EVENT</u>	<u>LOCATION</u>
2:00 PM to 5:00 PM	Registration	Lobby
5:00 PM to 7:00 PM	Board of Directors Meeting	Ballroom I

#### THURSDAY, FEBRUARY 26, 2015

<u>TIME</u>	<u>EVENT</u>	<u>LOCATION</u>
7:30 AM to 5:00 PM	Registration	Lobby
8:00 AM to 3:00 PM	Exhibits	Lobby
5:00 AM to 8:00 PM	Exhibits	Lobby
8:00 AM to 3:15 PM	Divisional Programs	See program for rooms
8:45 AM to 12:00 PM	Population Health Symposium	Ballroom II/III
9:30 AM to 12:00 PM	BioInformatics Symposium	TC 214
3:30 PM to 5:30 PM	2015 Dodgen Lecture & Presentation of Awards	Ballroom II, III Ballroom II, III
5:30 PM to 7:30 PM	Reception and Poster Session	Ballroom I

#### FRIDAY, FEBRUARY 27, 2015

<u>TIME</u>	<u>EVENT</u>	<u>LOCATION</u>
7:15 AM to 8:15 AM	Past-Presidents' Breakfast	TC 231
8:00 AM to 2:00 PM	Registration	Lobby
8:00 AM to 2:00 PM	Exhibits	Lobby
8:00 AM to 5:00 PM	Divisional Programs	See program for rooms
10:00 AM to 12:00 PM	Graduate Symposium, Sponsored by Mississippi INBRE	Ballroom II, III
12:00 PM to 1:00 PM	Mississippi INBRE & Millsaps/HHMI Howard Hughes Boxed Lunch	Ballroom I
1:00 PM to 3:00 PM	Undergraduate Symposium, sponsored by Millsaps/HHMI	Ballroom II, III
2:30 PM to 4:00 PM	Panel Discussion (History and Philosophy and Ecology Divisions)	TC 228
4:30 PM	MAS Business Meeting	Ballroom I



Thad Cochran Convention Center, Hattiesburg, MS

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**If Coming from the South on I-59:**

Take Exit 67A  
At bottom of ramp turn right  
At first traffic light turn left

**If Coming from the North on I-59:**

Take Exit 67A  
At bottom of ramp merge into Hwy 49 South  
At first traffic light turn left

**If Coming from the South on Highway 49:**

Take Highway 49 North to Hattiesburg  
Continue on Hwy 49 through Hattiesburg  
Just before Intersection of I-59 and Hwy 49 there will be a traffic light  
Turn right at traffic light

**If Coming from the North on Highway 49:**

Take Highway 49 South to Hattiesburg  
Pass the intersection of I-59 and Hwy 49  
Turn left at first traffic light past intersection

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Take Highway 98 to I-59  
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Take Hwy 49 south to first traffic light  
Take left at first traffic light

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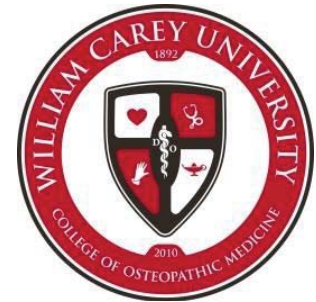
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Take left at first traffic light

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Belhaven University  
East Central Community College  
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Millsaps College  
Mississippi Gulf Coast Community College  
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9. Alcorn State University, Graduate Studies

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## 2015 Dodgen Lecture

3:30 p.m.

Thursday, February 26, 2015



### **USM Research: Transforming Everyday Life into Infinite Possibilities**

Given by

**Rodney D. Bennett, EdD**

**President**

**The University of Southern Mississippi**

Rodney D. Bennett serves as the chief executive officer and principle educational officer of The University of Southern Mississippi, a comprehensive doctoral and research-driven university with campuses in south Mississippi and along the Mississippi Gulf Coast. Appointed to the presidency by the Board of Trustees of the State Institutions of Higher Learning, he is responsible for every facet of institutional operations and must shape the University's educational policy and academic standards in cooperation with the State Commissioner of Higher Education.

As proven leaders in innovation, the University's faculty and students conduct transformative research that translates into real-world solutions, and its Center for Undergraduate Research affords students meaningful research opportunities. Since 2006, Southern Miss students have collected seven Goldwater Scholarships, three Truman Scholarships and 10 National Science Foundation Graduate Research Fellowships. The University is also recognized as one of a select number of institutions in the nation accredited in art, dance, music and theatre.

Under Dr. Bennett's leadership, the University has invested in new faculty positions and worked to increase access to quality education and research programs to serve the needs of the state of Mississippi and beyond. His commitment to the Gulf Coast region and support for its research potential is demonstrated by recent investments in academic leadership positions at the University's Gulf Park Campus in Long Beach and successful lobbying efforts for legislative support for the University's Gulf Coast Research Laboratory (GCRL) in Ocean Springs. USM's Department of Marine Science, housed at the John C. Stennis Space Center, recently acquired an \$11 million grant from the Gulf of Mexico Research Initiative (GoMRI) to conduct scientific studies of the impacts of oil on the Gulf's ecosystem and public health.

Dr. Bennett holds a Doctor of Education Degree in Educational Administration from Tennessee State University in Nashville and a Specialist in Education Degree, a Master of Education Degree in Educational Administration, and a Bachelor of Science Degree in Mass Communication from Middle Tennessee State University in Murfreesboro.

## **Graduate Symposium**

**Sponsored by**

**Mississippi INBRE**

**Friday, February 27, 2015**

**10:00 AM to 12:00 PM**

**Chair: Glen Shearer, Ph.D.**

**Coordinator: Jamie Allen**

**Keynote Speaker: Subrata Saha, Ph.D.**

Research Professor & Director of Musculoskeletal Research

Suny Downstate Medical Center

The symposium, sponsored by Mississippi IDEa Network of Biomedical Research Excellence (INBRE), is intended to promote and recognize meritorious research conducted by graduate students in the fields of science, medicine and engineering. Although housed at the University of Southern Mississippi, Mississippi INBRE is a network of colleges and universities throughout the state. The goal of Mississippi INBRE is to improve the research infrastructure in Mississippi through biomedical research. With a scientific focus on obesity, cancer and STDs, their mission is to improve health in Mississippi and increase the research competitiveness of the state.

## **Millsaps/HHMI Undergraduate Scholars Symposium**

**Honoring Excellence in Science in Mississippi**

**Friday, February 27, 2015**

**1:00 PM to 3:00 PM**

**Chair: Timothy Ward, Ph.D.**

This symposium is intended to expand the scope and depth of opportunities for undergraduate student researchers to meet other student researchers and their mentors as well as to provide a dedicated venue to disseminate and present their research activities.

Participation in undergraduate research increases self-confidence, independence, and critical thinking skills. Disseminating one's results by participating in conference symposia develops communication and presentation skills. These experiences create and foster a life-long quest for research and discovery. Howard Hughes Medical Institute (HHMI) is the largest private sponsor of education initiatives in the USA and seeks to strengthen science education at all levels of education and is dedicated to increasing the number of people who pursue science-related careers and to broadening access to science for all.

## DIVISIONAL SYMPOSIA AND PANEL DISCUSSIONS

Thursday, February 26, 2015, Time 9:30-12:00 , Location TC 214

### Mississippi INBRE Bioinformatics Symposium

#### *Big Data (BD2K) to Knowledge-Pitfalls, Progress, and Future*

This symposium will bring together scientist using bioinformatics tools. The main goal of this symposium is to promote the utility of bioinformatics in big data by discussing original research and perspectives leading to excitement and new ideas in young computational biologists' especially new investigators, undergraduate and graduate students (See page 40).

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## HEALTH SCIENCES & PSYCHOLOGY AND SOCIAL SCIENCES

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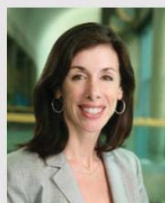
Thursday, February 26, 2015, Time 8:45-12:00, Location TC Ballroom II/III

### "Improving Health Outcomes in Mississippi"

Featuring:



**Mary Currier, MD, MPH**  
State Health Officer  
Mississippi State Department of Health  
*"Health Status of Mississippi and the Effects of Policy Change"*



**Kristi Henderson, DNP, CFNP, CACNP, FAEN**  
Chief Telehealth & Innovation Officer  
University of Mississippi Medical Center  
*"How Telehealth Can Affect  
Population Health in Mississippi"*



**Michael Forster, PhD, MSW**  
Dean, College of Health  
University of Southern Mississippi  
*"Public Health-Related Implications  
of Climate Change"*

**Facilitator: Claude Brunson, MD-** Dr. Claude Brunson is the Senior Advisor to the Vice Chancellor for External Affairs and Professor of Anesthesiology at the University of Mississippi School of Medicine. He is a native of Auburn, AL where he attended the Auburn public school system and graduated from Auburn High School. Dr. Brunson received his B.S. degree from the University of Alabama in Tuscaloosa, AL in 1983 after a four-year stint with the U.S. Navy as a Hospital Corpsman and Field Medicine Technician with the Fleet Marine Force. He completed his medical degree at the University of Alabama at Birmingham in Birmingham, AL in 1987. He completed an internship in Internal Medicine at Baptist Medical Centers in Birmingham, AL in 1988 and a residency in Anesthesiology at the University of Mississippi Medical Center. He joined the faculty in the School of Medicine in 1991. Dr. Brunson has been honored as the Chief Resident of his residency training program, recognition as Teacher of the Year on two occasions in the Department of Anesthesiology, and he serves on multiple committees at the Medical Center. He is active in his specialty and served as President of the Mississippi Society of Anesthesiologists in 1998 and now serves his specialty as a member of the Board of Directors of the American Society of Anesthesiologists. He has received regional and national recognition as one of "The Best Doctors in America" for multiple successive years. He is a member on the Board of Trustees for the Mississippi State Medical Association where he chaired its Council on Legislation, served on its Board of Trustees for 5 years, served as Chairman of the Board of Trustees in 2012-2013 before becoming the organization's President-Elect in 2013. Dr. Brunson serves on two gubernatorial appointed boards: the Mississippi State Board of Medical Licensure (MSBML) and the Emergency Medical Services Committee. He is the appointed physician member to the Mississippi Board of Nursing. Dr. Brunson assumed the role as President of the Mississippi State Medical Association in August of 2014 when he became the Association's first African American President.

**Mary Currier, MD, MPH-** Dr. Mary Currier became Mississippi's State Health Officer in 2010 after serving as State Epidemiologist from 1993 to 2003, and again from 2007 to 2009. Prior to serving as State Epidemiologist, she was a medical consultant with the agency. Dr. Currier began her public health career with the Mississippi State Department of Health as a staff physician for the prenatal care, family planning, STD, and pediatrics programs.

Recent Publications:

1. Cantey, P. T., Stramer, S. L., Townsend, R. L., Kamel, H., Ofafa, K., Todd, C. W., Currier, M., Hand, S., Varnado, W., Dotson, E., Hall, C., Jett, P. L., & Montgomery, S. P. (2012). The USA Trypanosoma cruzi Infection Study: evidence for vector-borne transmission of the parasite that causes Chagas disease among USA blood donors. *Transfusion*, 52 (9), 1922-30.
2. Skarbinski, J., Jain, S., Bramley, A., Lee, E. J., Huang, J., Kirschke, D., Stone, A., Wedlake, T., Richards, S. M., Page, S., Ragan, P., Bullion, L., Neises, D., Williams, R. M., Petrucci, B. P., Vandermeer, M., Lofy, K. H., Gindler, J., Finelli, L., & 2009 Pandemic Influenza A H1N1 Virus Fall Hospitalizations Investigation Team. (2011). Hospitalized patients with 2009 pandemic influenza A (H1N1) virus infection in the USA--September-October 2009. *Clin Infect Dis*, 52 (Suppl 1), S50-9.
3. Clark, T. A., Slavinski, S. A., Morgan, J., Lott, T., Arthington-Skaggs, B. A., Brandt, M. E., Webb, R. M., Currier, M., Flowers, R. H., Fridkin, S. K., & Hajjeh, R. A. (2004). Epidemiologic and molecular characterization of an outbreak of Candida parapsilosis bloodstream infections in a community hospital. *J Clin Microbiol*, 42 (10), 4468-72.
4. Harrington, T., Kuehnert, M. J., Kamel, H., Lanciotti, R. S., Hand, S., Currier, M., Chamberland, M. E., Petersen, L. R., & Marfin, A. A. (2003). West Nile virus infection transmitted by blood transfusion. *Transfusion*, 43 (8), 1018-22.

**Kristi Henderson, DNP, CNFP, CACNP, FAEN-** Dr. Henderson is the Chief Telehealth & Innovation Officer for the University of Mississippi Medical Center (UMMC). She holds dual appointments in the School of Medicine and School of Nursing at UMMC. A few of her accomplishments include: 2013 Robert Wood Johnson Nurse Executive Fellow, the 2014 Nurse Innovator of the Year, 2012 Advanced Practice Nurse of the Year, and voted an "Edge Runner" by the American Academy of Nurses. Dr. Henderson has spent the last twenty years of her career as an administrator, educator, innovator, researcher and clinician. She designs and implements innovative solutions to transform the health care system for improved health outcomes, improved efficiency and a lower cost. She has led the development of a statewide Telehealth Program which is recognized as a top telehealth program in the U.S. Dr. Henderson has testified to the White House Domestic Policy Council and made numerous presentations on telehealth across the country. Dr. Henderson is regularly consulted by other state health care leaders, politicians, physicians, nurses, journalists and members of the academic community. Some of her leadership roles include service as the Executive Director of the Mississippi Telehealth Association, Chair of the American Telemedicine Association's Institutional Council, and Mississippi Health Information Network's Board of Directors. She received her Doctorate of Nursing Practice degree from the University of Alabama at Birmingham, her master's degree in nursing, from the Mississippi University for Women, and her bachelor's degree in nursing from Mississippi College. She maintains national certification as a family and acute care nurse practitioner.

**Michael Forster, PhD, MSW-** Dr. Michael Forster is dean of the College of Health and professor of social work at the University of Southern Mississippi. Before joining the university in 1994, he served for fourteen years as a direct service social worker, supervisor and administrator in Chicago child welfare organizations. Forster is co-founder of the Family Network Partnership, a delinquency prevention and family counseling agency serving disadvantaged youth and families on Hattiesburg's east side. He is author or co-author of more than sixty academic publications over the past twenty years, and Principal Investigator on more than \$15 million in externally-funded grants and contracts. Forster holds degrees from Louisiana State University, the University of Massachusetts, and the University of Illinois.

#### OPERATION CHANGE – CHICAGO

Lynne C. Jones, Yashika Watkins, Duanny Alva, Verona Brewton, Thomas Mason

*Movement is Life Caucus*

**Introduction** In the USA, it is estimated that over 13.9% of adults aged 25 years and older and 33.6% of those 65 years and older have osteoarthritis (OA) [1]. There is a 'vicious' cycle which exists between osteoarthritis and limited

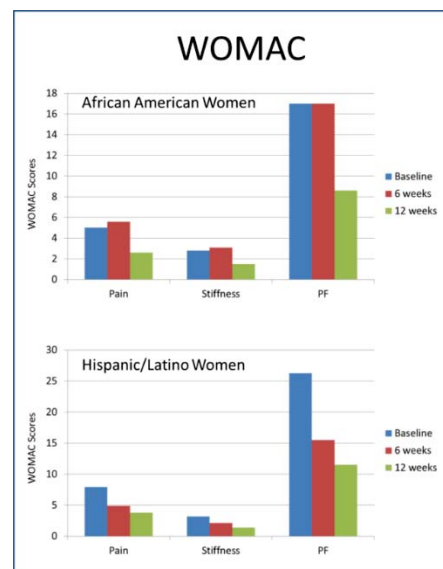
mobility, pain, obesity and other related comorbidities [2]. Arthritis burden and obesity are particularly problematic for African-American (AA) and Hispanic/Latina (H/L) women. The Operation Change program presents a new paradigm addressing behavior change and musculoskeletal health disparities; it is community-based, culturally sensitive, involves shared decision making, and is focused on movement and physical activity. The goal of this study was to determine the feasibility of this program.

**Methods** There were 72 participants (42 AA; 30 H/L women). The mean age was 61 years (range 41-75) for AA and 52 years (range 45-66) for H/L women. The mean BMI was 37 +/- 8.56 for AA and 35.62 +/- 5.56 for H/L women. The 12-week program was held at two community locations (Church: H/L, YMCA: AA). Programming encompassed presentations, motivational interviewing, individual goal setting, and planned activities. Presentations included: osteoarthritis, diabetes, movement as medicine, depression, and eating healthy. Discussions during motivational interviewing involved setting/meeting personal goals, developing a web of support, and determining progress. Activities included walking, group activities (games), low impact aerobics, and complementary/alternative medicine activities. Assessments were performed at baseline, 6 and 12 weeks. Assessments included: participant demographic questionnaire, physical assessments (weight, height, BP, resting heart rate), Timed 50' Walking Test, WOMAC, SF-36, PHQ8 Depression Scale, and patient interviews. statistical analyses were performed using JMP statistical software version 10 (SAS, Cary, N.C.). **Results** There were no significant changes in the systolic and diastolic pressures or pulse rates over the 12 week period. While both groups demonstrated a statistically significant decrease in weight ( $p=0.04$ ), there was considerable variability between individuals. Based on a threshold of 2% body weight, 13 AA women and 9 H/L lost weight. There was a significant decrease in 50 ft. walking time for the H/L women ( $p<0.0001$ ) and a trend to decreased time for the AA women ( $p=0.0759$ ).

For the WOMAC, there were significant decreases in pain ( $p<0.0001$ ), stiffness ( $p<0.0001$ ) and physical functioning ( $p<0.0001$ ) for both groups. These corresponded to the findings for the SF-36 questionnaires. Regarding the PHQ-8, the H/L women demonstrated a significant decrease in the scores ( $p<0.0001$ ); there was a trend towards a decreased PHQ score over the 12 week period ( $p=0.0771$ ) for the AA women. Participants scored the motivational interviewing highly.

**Conclusions** Operation Change was successful in educating and creating opportunities for increasing physical activity level of participants. The program focused on increasing mobility rather than weight loss. Significant changes in pain and function scores were observed. Further study is needed to evaluate sustainability. This study supports a new paradigm to behavioral modification enabling participants to take an active role in living with their arthritis in a program which is community-based, incorporates shared decision making, is culturally sensitive, and focused on movement and activity.

- [1] Lawrence RC, Felson DT, Helmick CG, Arnold LM, Choi H, Deyo RA, et al. Estimates of the prevalence of arthritis and other rheumatic conditions in the USA. Part II. *Arthritis and rheumatism* 2008;58:26-35.
- [2] Wluka AE, Lombard CB, Cicuttini FM. Tackling obesity in knee osteoarthritis. *Nature reviews Rheumatology* 2013;9:225-35.



## HISTORY AND PHILOSOPHY OF SCIENCE

### PRACTICAL AND THEORETICAL CONSIDERATIONS FOR METHODS IN BIOLOGY

Friday, February 27, 2015, Time 2:30-4:00, Location TC 228

**Paula Smithka, Ph.D.** - Associate Professor, University of Southern Mississippi,

Smithka has a doctorate and a master's degree in philosophy from Tulane University as well as a bachelor's degree in philosophy and a bachelor's degree in biology from the University of North Carolina at Charlotte. She specializes in philosophy of science with an emphasis in philosophy of biology; and has published articles in the area of social/political philosophy, particularly concerning war and peace issues. Dr. Smithka teaches courses in philosophy of science, epistemology, logic, and introduction to philosophy, including an Honors College section of the course. She developed a new course, Philosophy through Science Fiction, which was taught for the first time in the spring semester of 2012. She has a book out, edited with Courtland Lewis as part of Open Court Press' Popular Culture and Philosophy series—*Doctor Who and Philosophy: Bigger on the Inside* (December 2010). This book is fun and serious philosophy, addressing philosophical issues in the longest-running science fiction show in history, the British series Doctor Who. Author-contributors to the volume span the globe. Philosophical issues addressed in the book include: personal identity, philosophy of science, ethics, existential concerns, aesthetics, and the impact of Doctor Who on British culture in



particular, but human culture more generally. She also has another book, *Community, Diversity, and Difference: Implications for Peace*, edited with Alison Bailey from Rodopi Press (2002). This book contains chapters addressing nationalism, identity politics, multiculturalism, democracy, peace-making strategies, among other topics. Her present research interests include philosophy of biology, philosophy of mind, and, in the area of social/political philosophy, the issue of tolerance and war and peace issues. She enjoys travel, beaches, birds, and of course, science fiction.

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**Mac H. Alford** - Associate Professor and Curator of the Herbarium, University of Southern Mississippi

Plant systematics and floristics are the two major areas of his research. In systematics, his research focuses on the tropical relatives of willows, poplars, and cottonwoods (Salicaceae and Samydidaceae), trees and shrubs formerly placed in the heterogeneous family Flacourtiaceae. Delimiting and describing species, working out the nomenclature, and mapping distributions make up the classical aspects of these studies, and inferring relationships using phylogenetic techniques with data obtained from morphology, phytochemistry, anatomy, and DNA sequences make up the modern aspects. Although he studies the relationships throughout these family (and related families), his descriptive and exploratory research has been focused on neotropical members. Present interests include inferring the evolution of the reduced flowers of willows and reconstructing the biogeographical history of the family. In floristics, his research focuses on the state of Mississippi and the southeastern coastal plain. Mississippi currently lacks a manual, taxonomic keys, and county-level distribution maps of the known species of plants, and only recently has an electronic checklist of the species become available. Along with databasing the existing collections. He is actively collecting within the state to ensure that a complete checklist is prepared and that distribution maps reflect the actual distributions. He is also actively involved in the Flora Mesoamericana project, which covers plants that occur in southern Mexico to Panama. Students are welcome in both of these areas of research. Local floras, species complexes in both the southeastern U.S. and the tropics, and classical and modern taxonomic questions are topics ready for pursuit. He is also curator of the USM Herbarium. The collection presently consists of about 25,000 specimens and is an invaluable resource for the flora of Mississippi.

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**Brian R. Kreiser** - Professor, University of Southern Mississippi

He is interested in the evolutionary forces that shape the geographic patterns of genetic variation within a species, and often this work blends into the areas of systematics and conservation. While much of the research in his lab focuses on fishes, his research program tends to be more question-oriented as opposed to organism specific. Currently his lab is working on projects that are focused on the biota of the southeastern USA (including freshwater fishes and gopher tortoises). Students working in his lab over the years have pursued a broad array of interests including blue crabs, pythons, anadromous fishes, freshwater turtles, Central American fishes and invasive plants. While the organisms are diverse, the common theme is the study of geographic patterns of genetic variation.

#### **Representative Publications**

- Schaefer, J.F., D.D. Duvernell and B.R. Kreiser. 2011. Ecological and genetic assessment of spatial structure among replicate contact zones between two topminnow species. *Evolutionary Ecology* 25:1145–1161.
- Matamoros, W.A., B.R. Kreiser and J.F. Schaefer. 2011. A delineation of Nuclear Middle America biogeographical provinces based on river basin faunistic similarities. *Reviews in Fish Biology and Fisheries* DOI 10.1007/s11160-011-9232-8.
- Ennen, J.R., J.E. Lovich, B.R. Kreiser, W.W. Selman and C.P. Qualls. 2010. Genetic and morphological variation between populations of the Pascagoula Map Turtle (*Graptemys gibbonsi*) in the Pearl and Pascagoula Rivers with description of a new species. *Chelonian Conservation and Biology* 9:98–113.
- Ennen, J.R., B.R. Kreiser and C.P. Qualls. 2010. Low genetic diversity in several Gopher Tortoise (*Gopherus polyphemus*) populations in the DeSoto National Forest, Mississippi. *Herpetologica* 66:91-98.
- Bowen, B.R., B.R. Kreiser, P.F. Mickle, J.F. Schaefer and S.B. Adams. 2008. Phylogenetic relationships among North American *Alosa* species (Clupeidae). *Journal of Fish Biology* 72:1188-1201.
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## **MATHEMATICS, COMPUTER SCIENCE AND STATISTICS**

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Thursday, February 26, 2015, Time 9:00-10:00, Location TC 229

### **STEM, PROJECT-BASED LEARNING: STRATEGIES AND EXPERIENCES IN THE CLASSROOM**

Carl DeWitt<sup>1</sup> and Gail Dickinson<sup>2</sup>

<sup>1</sup>Hinds Community College

<sup>2</sup>STEM Instructor, Germantown Middle School

Currently, an initiative exists globally to create a learning environment in which students can become sustainably proficient in Science, Technology, Engineering, and Mathematics (STEM). STEM education and how it relates to project-based learning must be understood. Project-based learning is an engaging classroom approach in



which students explore and solve real-world problems with concepts and ideas from STEM subjects. By using project-based learning, teachers bring excitement and creativity back into the classroom. The appropriate hands-on experiences give students the opportunity to successfully learn and take on the role of a scientist or engineer and begin to view themselves as a person who can understand and express science. In understanding what and how the STEM classroom looks, strategies will be discussed on transforming traditional lesson plans into problem-based STEM experiences emphasizing engineering as the center for solving real-world problems. All of the activities presented in this session have been field tested with 8th graders in Mississippi public schools. Examples of innovative projects include: designing a parachute project, snack packaging project, designing an iPod dock (sound) project and how to design an app for a cell phone. Now is the time to integrate and embrace STEM education and innovation in Mississippi classrooms. Through a project-based learning perspective and foundation, students will be prepared to enter the workforce solidly positioned to successfully fill the marketplace positions open for STEM based careers.



## OVERVIEW OF DIVISIONAL PROGRAMS

### AGRICULTURE AND PLANT SCIENCE

Thursday, February 26

**MORNING**

Room TC 231

- 9:00 COMPARATIVE ANALYSIS OF YIELD AND FRUIT QUALITY ATTRIBUTES OF ORGANICALLY GROWN MELONS (*CUCUMIS MELO L.*) FROM AROUND THE GLOBE
- 9:15 PLANT DENSITY EFFECTS ON BIOMASS DEVELOPMENT AND RATE OF RESIDUE DECOMPOSITION OF FOUR VARIETIES OF SWITCHGRASS (*PANICUM VIRGATUM L.*) ON MEMPHIS SILT LOAM FOR EROSION PREDICTION, NUTRIENT MANAGEMENT, AND CONSERVATION PLANNING
- 9:30 SACCHARIFICATION AND FERMENTATION OPTIMIZATION IN *MISCANTHUS GIGANTEUS* BASED BIOETHANOL PRODUCTION
- 9:45 BEST SEASON TO PRODUCE CABBAGE IN SOUTHWEST AND CENTRAL MISSISSIPPI: EMPIRICAL EVIDENCE
- 10:00 WHOLE GENOME SEQUENCING AND THE GENETIC DIVERSITY OF AN ALCORN STATE SWEET POTATO LEAF CURL VIRUS (SPLCV) ISOLATE
- 10:15 BREAK
- 10:30 A COMPARATIVE STUDY TO THE 2011/2013 WATER QUALITY ASSESSMENTS IN THE PASQUOTANK WATERSHED IN NORTHEASTERN NORTH CAROLINA WITH A SEA LEVEL RISE COMPONENT
- 10:45 *PSEUDOGNAPHALIUM OBTUSIFOLIUM*: REVEALING THE MYSTERIOUS SECRETS OF A COMMONPLACE NATIVE WEED
- 11:00 TRANSMISSION ELECTRON MICROSCOPY STUDY OF *LISTERIA MONOCYTOGENES*
- 11:15 EFFECT OF AGRONOMIC PRACTICES ON PEANUT GROWTH AND YIELD POTENTIAL
- 11:30 MORTALITY OF CONTAINER-GROWN BLUEBERRY PLANTS INOCULATED WITH
- 11:45 BUSINESS MEETING

Thursday, February 26

**AFTERNOON**

POSTER SESSION (1:15-2:45)

1. NANOTECHNOLOGY-BASED APPROACH TO IMPROVE FERTILITY OUTCOMES IN SWINE
2. A COMPARATIVE STUDY TO THE 2011/2013 WATER QUALITY ASSESSMENTS IN THE PASQUOTANK WATERSHED IN NORTHEASTERN NORTH CAROLINA WITH A SEA LEVEL RISE COMPONENT.
3. HONEY PLANT DIVERSITY IN THE STATE OF MISSISSIPPI
4. INTEGRATED PEST MANAGEMENT EDUCATION FOR SMALL FARM FAMILIES IN RURAL MISSISSIPPI
5. SUSTAINABLE VEGETABLE PRODUCTION, MARKETING AND MANAGEMENT FOR LIMITED-RESOURCE FARMERS
6. GERMINATION AND EARLY SEEDLING GROWTH OF *FESTUCA ARUNDINACEA*, *TRITICUM AESTIVUM*, AND *BRASSICA JUNCEA* UNDER VARYING LEVELS OF LEAD AND CADMIUM
7. GROWTH AND LEAD ACCUMULATION OF *FESTUCA ARUNDINACEA* GROWN IN LEAD-CONTAMINATED SOIL: EFFECTS OF BACTERIAL INOCULATION
8. EFFECT OF ENVIRONMENTAL VARIATION AND SPATIAL DISTANCE ON SOIL MICROBIAL
9. DIFFERENCES IN SURVIVAL OF HEAT STRESS ADAPTED CELLS OF *LISTERIA MONOCYTOGENES* SEROTYPE 1/2A IN DIFFERENT SANITIZERS/DISINFECTANTS AND ESSENTIAL OILS
10. GENETIC DIVERSITY IN CYTOPLASMIC AND NUCLEAR GENOME OF UPLAND COTTON
11. PHYTOTOXIC EVALUATION OF WHOLE PINE TREE SUBSTRATES

Room

Ballroom II/III

- 3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION



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**CELLULAR, MOLECULAR AND DEVELOPMENTAL BIOLOGY**


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Thursday, February 26

**MORNING****Room TC 210**

- 7:55 WELCOME
- 8:00 A ROLE FOR TOLL-LIKE RECEPTOR 8 IN WEST NILE VIRUS INFECTION
- 8:15 ROLE OF MSAABCR OPERON IN THE REGULATION OF PROTEASES AND BIOFILM DEVELOPMENT IN STAPHYLOCOCCUS AUREUS
- 8:30 *msaB* REGULATES BIOFILM DEVELOPMENT AND VIRULENCE IN STAPHYLOCOCCUS AUREUS
- 8:45 THE IN VITRO EVALUATION OF PEDIATRIC BRAIN CANCER CELL LINE
- 9:00 THE ROLE OF THE PCD PROTEIN IN CARBOXYSUME BIOLOGY
- 9:15 MOLECULAR AND PHENOTYPIC CHARACTERIZATION OF CLINICAL METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS ISOLATES CAUSING BACTEREMIA AT A MAJOR HOSPITAL IN SOUTHERN MISSISSIPPI
- 9:30 ANDROGEN DEPRIVATION PROMOTES ALTERNATIVE SPLICING OF ANDROGEN RECEPTOR THROUGH REGULATION OF PCGEM1
- 9:45 GRANULIN E AS AN INFLAMMATORY MEDIATOR IN ALZHEIMER'S DISEASE
- 10:00 BREAK
- 10:15 AUTOPHAGY FROM ENDOPLASMIC RETICULUM STRESS IS CONTROLLED BY PRO-APOPTOTIC GENES IN RAT HEPATOCYTES
- 10:30 A NOVEL ROLE FOR OSTEOPONTIN IN FACILITATING WEST NILE VIRUS NEUROINVASION
- 10:45 MODULATING CCM1P EXPRESSION TO ELUCIDATE THE ASSEMBLY PROCESS OF THE MITORIBOSOME MINOR SUBUNIT
- 11:00 THE MSAABCR OPERON REGULATES CAPSULE POLYSACCHARIDE PRODUCTION IN STAPHYLOCOCCUS AUREUS
- 11:15 THE EFFECTS OF ENVIRONMENTAL CONDITIONS ON THE BIOACTIVITY OF OCCIDIOFUNGIN, A NOVEL ANTIFUNGAL
- 11:30 EFFECTS OF PSEUDOGNAPHALIMUM OBTUSIFOLUM EXTRACTS ON PROLIFERATION OF SACCHAROMYCES
- 11:45 INVESTIGATING THE PROMOTER OF THE MOLD SPECIFIC GENE M46, IN THE PATHOGENIC DIMORPHIC FUNGUS HISTOPLASMA CAPSULATUM
- 12:00 LUNCH BREAK

Thursday, February 26

**AFTERNOON****Room TC 210**

- 1:00 MPACT PCP1 MUTATIONS HAVE ON ATP SYNTHASE SUPER-COMPLEX ASSEMBLY AND MITOCHONDRIAL MORPHOLOGY
- 1:15 INVESTIGATING M46, A PHASE SPECIFIC GENE, IN THE DIMORPHIC FUNGUS HISTOPLASMA CAPSULATUM



- 1:30 **BIOCHEMICAL AND MOLECULAR METHODS FOR THE DETECTION OF ENDOGENOUS CFTR EXPRESSION**
- 1:45 **RESCUE OF PLASMA MEMBRANE CFTR BY INHIBITORS OF PROTEASOMES AND LYSOSOMAL ENZYMES**
- 2:00 **COMPETITION EXPERIMENTS SHOW THAT THE [URE3] PRION OF SACCHAROMYCES CEREVISIAE PUTS PRION-CONTAINING CELLS AT A GROWTH DISADVANTAGE IN A NUTRIENT-RICH ENVIRONMENT.**
- 2:15 **ENHANCEMENT OF TOTAL RADICAL TRAPPING POTENTIAL OF CHEDDAR WHEY CONTAINING EMULSIONS BY ULTRA-HIGH-PRESSURE HOMOGENIZATION**
- 2:30 **BUSINESS MEETING**

**Room**

**Ballroom II/III**

- 3:15 **DODGEN LECTURE AND MEMBERSHIP RECOGNITION**

**EVENING**

**Poster Session**

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. **PNA-DNA FOUR-WAY JUNCTIONS AS A POSSIBLE THERAPEUTIC FOR PROINFLAMMATORY CYTOKINE HIGH MOBILITY GROUP B1**
2. **THE IN VITRO EVALUATION OF PEDIATRIC BRAIN CANCER CELL LINES**
3. **THE EFFECTS OF LPS AND MWCNT ON ALVEOLAR EPITHELIAL LUNG CELLS**
4. **MESENCHYMAL STEM CELLS SUPPORT OSTEOSARCOMA GROWTH BY ENTERING AN AUTOPHAGIC STATE**
5. **IDENTIFICATION OF FUNGI CAUSING WILT DISEASES ON MISSISSIPPI COTTON PLANTS**
6. **TESTOSTERONE SUPPLEMENTATION CHANGES ADIPOSE COMPOSITION IN OBESE ZUCKER RATS**
7. **AGES AND AGING: ELIMINATING RAGE EXTENDS LIFESPAN**
8. **HYPERINSULINEMIA DOES NOT AFFECT MELANOMA PROLIFERATION**
9. **CHARACTERIZING THE PROMOTER OF M46, A MOLD SPECIFIC GENE, IN THE DIMORPHIC FUNGUS HISTOPLASMA CAPSULATUM**
10. **GENE EXPRESSION IN OXIDATIVE STRESS PATHWAY IS ALTERED IN SPACE-FLOWN TK6 CELLS**
11. **RAT MODEL OF ISCHEMIA REPERFUSION INJURY (IRI)**
12. **THE INVESTIGATION OF THE SPECIFIC FUNCTIONS OF TWO SUPEROXIDE DISMUTASE SPECIES IN OXIDATIVE STRESS DAMAGE AND MICROBIAL COMMUNITY HOMEOSTASIS IN AMBLYOMMA MACULATUM**
13. **INVESTIGATION OF ANGIOTENSIN-CONVERTING METALLOENZYME (ACE) IN AMBLYOMMA MACULATUM**
14. **THE ADDITION OF RAPAMYCIN CAUSES DE-REPRESSION OF THE NITROGEN REGULATORY PROTEIN AreA IN THE DIMORPHIC FUNGUS HISTOPLASMA CAPSULATUM**
15. **BONE MARROW MESENCHYMAL STEM/STROMAL CELLS DERIVED EXOSOMES IN BREAST CANCER PROGRESSION AND METASTASIS**
16. **RAP1A GTPASE: A NOVEL LINK BETWEEN PKA AND AGE/RAGE SIGNALING CASCADES**
17. **RAP1A IN AGE/RAGE-PKC-Z SIGNALING IN TYPE 2 DIABETES MELLITUS**
18. **RAP1A INTERCONNECTS AT1R AND RAGE SIGNALING IN DIABETES**
19. **A NOVEL MICRORNA TARGETS SUZ12 AFFECTING CELL PROLIFERATION.**
20. **NON-EMBRYONIC STEM CELL CORE (NESCC) AT UNIVERSITY OF MISSISSIPPI MEDICAL CENTER**
21. **IDENTIFICATION OF IL-6 AND IL-10 IN CHANNEL CATFISH, ICTALURUS PUNCTATUS**
22. **INVESTIGATING THE ROLE OF M46 IN DRUG RESISTANCE IN THE DIMORPHIC FUNGUS HISTOPLASMA CAPSULATUM**
23. **THE IMPACT PCP1P MUTATIONS HAVE ON MITOCHONDRIAL GENOME STABILITY AND MORPHOLOGY**
24. **AN EXAMINATION OF OBESITY-INDUCED EPITHELIAL TO MESENCHYMAL TRANSITION IN MELANOMA CELLS**
25. **EXPRESSION AND PURIFICATION OF CCM1P IN ESCHERICHIA COLI**
26. **CCM1P IS REQUIRED TO STABILIZE 15S RRNA BY PROTEIN-RNA INTERACTION DURING**

- MITORIBOSOME BIOGENESIS**
27. **IDENTIFICATION OF EFFECTOR PROTEINS OF HISTONE LYSINE METHYLATION IN RICE**
  28. ***VERNONIA AMYGDALINA* (V. *AMYGDALINA*): THERAPEUTIC FOOD FOR CANCER**
  29. **THERAPY REDUCTION OF LYSOSOMAL ACID SPHINGOMYELINASE ACTIVITY BY 2-HYDROXY-PROPYL-B-CYCLODEXTRIN**
  30. **DECIPHERING THE FUNCTIONAL COLLABORATION OF MID AND BRIC-A-BRAC 2 AS POTENTIAL REGULATORS OF CELLULAR PROLIFERATION WITHIN ADULT *DROSOPHILA* OVARIES**
  31. **REGULATION OF MICRORNA-1 AND ITS TARGET IN A549 CELLS**
  32. **REDUCED OXIDATIVE DEGRADATION OF COATED RETAIL-CUT MISSISSIPPI FARM-RAISED CATFISH FILLET USING ULTRA-HIGH PRESSURE HOMOGENIZED CHEDDAR WHEY AND**
  33. **GENETIC MANIPULATION IN THE TWO-SPOT SPIDER MITE**
  34. **USING A POLYANILINE BASED SENSOR FOR DETECTION OF miRNA EXPRESSION**
  35. **SCREENING FOR FACTORS INVOLVED IN MICRORNA PROCESSING**
  36. **CHARACTERIZING A MOLD SPECIFIC GENE IN THE PATHOGENIC DIMORPHIC FUNGI *HISTOPLASMA CAPSULATUM***
  37. **FRACTIONATION OF CRUDE CHYMOTRYPTIC HYDROLYZATE OF SODIUM CASEINATE BASED ON HYDROPHOBICITY**
  38. **USE OF MIXED STABILIZATION SYSTEMS TO OBTAIN STABLE NANO-GLOBULAR DISPERSIONS**

Friday, February 27

**MORNING**

**Room TC 210**

- 8:00 **COMPARATIVE ANALYSIS OF QPCR AND DDPCR METHODS FOR QUANTIFICATION OF BACTERIAL LOAD IN TICK TISSUES**
- 8:15 **ELUCIDATING THE ROLE OF REPROLYSIN METALLOPROTEASES IN *AMBLYOMMA AMERICANUM***
- 8:30 **CAFFEINE ADMINISTRATION IN A 3-DIMENSIONAL CO-CULTURE SYSTEM MEANT TO RECAPITULATE IN VIVO SIGNALING FROM LUMEN-TO-ENTERIC NERVOUS SYSTEM**
- 8:45 **MAKING SENSE OF THE *AMBLYOMMA MACULATUM* SALIVARY GLAND SIALOPROTEOME**
- 9:00 **PARACRINE SIGNALING IS KEY FOR MELANOMA CELL MIGRATION**
- 9:15 **EFFECTS OF SURFACTANTS ON PARTICLE SIZE DISTRIBUTION AND ANTIOXIDATIVE POTENTIAL OF PEANUT OIL-IN-WATER NANOEMULSIONS STABILIZED BY WHEY PROTEIN CONCENTRATE**
- 9:30 **ISOLATION OF BOVINE  $\alpha$ S2-CASEIN AND FRACTIONATION OF ITS TRYPTIC HYDROLYZATES BY SIZE-EXCLUSION HIGH PERFORMANCE CHROMATOGRAPHY**
- 9:45 **ELUCIDATING THE ROLE OF PHOSPHATIDYLCHOLINE TRANSFER PROTEIN (PCTP) IN *TETRAHYMENA THERMOPHILA* CONJUGATION.**
- 10:00 **PHENOTYPIC VARIATION OF VIRULENCE IN THE ENTOMOPATHOGENIC BACTERIUM *XENORHABDUS NEMATOPHILA***



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## CHEMISTRY AND CHEMICAL ENGINEERING

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Thursday, February 26

**MORNING**

Room TC 218A

- 7:50 WELCOME
- 8:00 DEVELOPMENT OF IN-VIVO TRACEABLE CARRIER FOR GUIDED DELIVERY OF ANTICANCER DRUGS
- 8:15 DOPING-INDUCED MOLECULAR PACKING OF CONJUGATED POLYMERS
- 8:30 USING NMR SPECTROSCOPY TO STUDY PROTEIN STRUCTURE ON NANOPARTICLE SURFACES
- 8:45 MCF-7 CELL VIABILITY STUDY ON VERNONIA AMYGDALINA ETHANOL AQUEOUS EXTRACT AND ITS ENZYMATIC HYDROLYSATES WITH  $\alpha$ -AND- $\beta$ -AMYLASES
- 9:00 BIOGEOCHEMISTRY OF TRACE ELEMENTS AND HEAVY METALS IN THE GRAND BAY NATIONAL ESTUARINE RESERVE IN THE NORTHERN GULF OF MEXICO
- 9:15 ATOMIC FORCE MICROSCOPY AND KELVIN PROBE FORCE MICROSCOPY STUDY OF POLY(3-HEXYLTHIOPHENE) NANOWHISKERS
- 9:30 CHARGE DENSITY VARIATION OF HYDROPHILIC-BLOCK-CATIONIC COPOLYMERS FOR TUNING COMPLEXATION WITH SIRNA AND THE EFFECTS ON GENE SUPPRESSION
- 9:45 ANALYSIS OF NMR DATA TO INVESTIGATE PROTEIN DYNAMICS
- 10:00 MORNING BREAK
- 10:15 SYNTHESIS AND CHARACTERIZATION OF A NOVEL ANTI-FOULING COATING FOR MARINE VESSELS
- 10:30 PROGRESS TOWARD THE TOTAL SYNTHESIS OF THE LYCOPODIUM ALKALOID PALHININE A
- 10:45 WINSTEIN-MASAMUNE DEAROMATIZATION APPROACH TO THE SPICROCICLYC CORE OF THE LYCOPODIUM ALKALOID MAGELLANINE
- 11:00 INVESTIGATION OF A VINYL SULFOXIDE-CARBODIIMIDE ANNULATION VIA [3,3]-SIGMATROPIC REARRANGEMENT AND RING CLOSURE
- 11:15 FINDING A GENERAL AND TUNABLE METHOD FOR ESTER TO ETHER REDUCTION
- 11:30 PHOTOCATALYTIC DEGRADATION OF CRYSTAL VIOLET DYE ON POSS CONTAINING TITANIA-THIOL-ENE SUBSTRATES
- 11:45 UTILIZING DIRECT AND INDIRECT SOLUTION-BASED ASSAYS TO CHARACTERIZE SINGLET OXYGEN GENERATION FROM FULLERENE THIOL DERIVATIVES
- 12:00 – 1:30 LUNCH

Thursday, February 26

**AFTERNOON**

ROOM TC 218A

- 1:30 DETERMINING FUDAMENTAL STRUCTURE-REACTIVITY RELATIONSHIPS IN THE PREPARATION OF NOVEL THIOLATED C60 DERIVATIVES
- 1:45 COMPLETE SYNTHESIS OF ANALOGUES OF TUBERCULOSIS MEDICATION, ETHAMBUTOL, WITH KNOWN INTERMEDIATES, DIETHYL ETHYLMALONATE AND DIETHYL PHENYLMALONATE
- 2:00 STEREOSELECTIVE PREPARATION OF 3, 5-DISUBSTITUTED PYRROLIDINE-3-CARBOXYLIC ACIDS AS CATALYSTS IN THE ASYMMETRIC ALDOL AND MANNICH REACTIONS

- 2:15 SYNTHESIS AND APPLICATION OF (R)-3-METHYLPYRROLIDINE-3-CARBOXYLIC ACID  
 2:30 Ti(III) and Ti(IV) AS NOVEL CATALYST FOR GENERATING CADMIUM VAPOR: IS THIS A  
 REVOLUTION IN CADMIUM COLD VAPOR GENERATION?  
 2:45 CLEANING THE SURFACE OF GRAPHENE OXIDE BY ELECTROCHEMICAL REDUCTION:  
 AN IN SITU RAMAN SPECTROELECTROCHEMICAL STUDY

3:00 BUSINESS MEETING

Room

Ballroom II/III

3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

EVENING

Poster Session

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. SCREENING OF FULLERENE NANOPARTICLES FOR BIOLOGICAL TARGETS: INVERSE DOCKING STUDY
2. INVESTIGATION ON AMINE CURED EPOXY POLYMERS AND WATER INTERFACE: A MOLECULAR DYNAMICS APPROACH
3. COMPUTING ACIDITIES OF BARBITURIC AND THIOBARBITURIC ACID
4. RELATIVE STABILITIES OF DERIVATIVES OF 9-METHYLANTHRACENE AND 9-METHYLENE-9,10-DIHYDROANTHRACENE
5. CHEMOENZYMATIC SYNTHESIS OF ETHAMBUTOL ANALOGUES CONTAINING CHIRAL 4-AMINOALCOHOLS
6. DI-HEME PROTEIN MAUG AS A DUAL MRI CONTRAST AGENT
7. AN EF-HAND MOTIF AS IN-VIVO TRACING TAGINPOLYPEPTIDE-BASED ANTICANCER DRUG CARRIER
8. DEVELOPMENT OF IN-VIVO TRACEABLE CARRIER FOR GUIDED DELIVERY OF ANTICANCER DRUGS
9. CONVENTIONAL STRAIN ENERGIES OF THE OXAPHOSPHETANES AND THE OXADIPHOSPHETANES
10. THE ESCHERICHIA COLI YFDXWUVE OPERON
11. MICROWAVE-ASSISTED ALKYLATION OF ANILINES: ALKYLATION OF 2,4-DIMETHYLANILINE WITH VINYLARENES
12. SYNTHESIS OF CO<sub>2</sub>-RESPONSIVE POLYMERIC MICELLES VIA RAFT POLYMERIZATION
13. AMPHIPHILIC COPOLYMERS CAPABLE OF FORMING MICELLES TO SERVE AS UNIMERIC-DISPERSANTS OR GELATORS FOR OIL SPILL REMEDIATION APPLICATIONS
14. PLASMONIC NANOCRYSTALS WITH PRECISE GOLD ATOMS
15. ELECTRO-KINETIC ENHANCED PHYTOREMEDIATION FOR THE RESTORATION OF MULTI-METALS(CD, PB, AS AND CS) CONTAMINATED SEDIMENTS
16. EFFECT OF CHAIN LENGTH, NUMBER OF CHAINS AND CHARGE ON THE IN VITRO CYTOTOXICITY OF SURFACE COATING AGENTS USED ON NANOPARTICLES
17. TOXICITY OF GOLD NANOPARTICLES AND GOLD IONS TO BACTERIA
18. THE ADSORPTION OF CESIUM, STRONTIUM AND COBALT BY MESOPOROUS MATERIALS
19. PREPARATION AND CHARACTERIZATION OF THIOL-ENE POLYMER MICROBEADS USING AN ACOUSTIC EXCITATION MODEL
20. NOVEL NITROGEN-FLUORINE-CODOPED TiO<sub>2</sub> FOR DEGRADATION OF BPA UNDER VISIBLE LIGHT INVESTIGATION ON AMINE CURED EPOXY POLYMERS AND WATER INTERFACE: A MOLECULAR DYNAMICS APPROACH
21. INVESTIGATION ON AMINE CURED EPOXY POLYMERS AND WATER INTERFACE: A MOLECULAR DYNAMICS APPROACH

22. DECARBOXYLATIVE PHOTOCYCLIZATION OF CATIONIC PHTHALIMIDE AND QUINOLINE/ISOQUINOLINE  $\omega$ -CARBOXYLIC ACIDS
23. ANALYSIS OF THE DNA-CLEAVING EFFICIENCIES OF BIFUNCTIONAL DNA-CLEAVING REAGENTS
24. PHOTOCHEMISTRY OF PYROMELITTIMIDES
25. 1,8-NAPHTHALIMIDE FLUORESCENCE IN REVERSE MICELLES
26. BIOACCUMULATION OF HEAVY METAL AND METALLOID IN *CRASSOSTREA VIRGINICA* IN THE GULF OF MEXICO
27. NOVEL NITROGEN-FLUORINE-CODOPED TiO<sub>2</sub> FOR DEGRADATION OF BPA UNDER VISIBLE LIGHT
28. MORPHOLOGY-PROPERTY RELATIONSHIP FOR BINARY ORGANIC FILMS
29. DISCOVERING CHEMICAL CONSTITUENTS OF THE PASSION FLOWER *P. LUTEA*
30. ICP-MS ANALYSIS OF METAL CONTAMINATION IN SOFT TISSUES AND BONY PARTS OF FISH FROM THE MISSISSIPPI RIVER
31. DETERMINATION OF CADMIUM AND LEAD IN TABLE SALTS AND MULTI-MINERAL SUPPLEMENTS BY ICP-MS AFTER SOLID PHASE EXTRACTION WITH A NEWLY SYNTHESIZED CHELATING RESIN
32. A NOVEL SALICYLALDEHYDE FUNCTIONALIZED CHELATING POLYMER FOR SOLID PHASE EXTRACTION OF URANIUM(VI) AND THORIUM (IV) IN SEAWATER SAMPLES FOR ICP-MS DETECTION
33. GENERATION OF VOLATILE CADMIUM SPECIES IN ACIDIC MEDIA WITH THE AID OF AL(III), SC(III), Y(III) IN THE PRESENCE OF KCN FOR ICP-MS MEASUREMENT
34. IMPACT OF LIGHT EXPOSURE AND CHELATING LIGANDS ON ION RELEASE PROPERTIES OF SILVER NANOPARTICLES
35. THE ADSORPTION OF CS, SR AND CO BY MESOPOROUS SILICA MODIFIED BY THIOGLYCOLIC ACID AND NANOCARBON SYNTHESIZED BY VANILLIC ACID
36. OPTICAL AND MASS SPECTROSCOPIC METHODS FOR HALIDE BINDING WITH TRIPODAL-BASED COPPER(II) COMPLEXES
37. A NEW HEXAFUNCTIONAL UREA-BASED RECEPTOR FOR SULFATE BINDING
38. SYNTHESIS AND BINDING EVALUATION OF BIS-3,5-TRIFLUOROMETHYLPHENYL TRIPODAL UREA ANION RECEPTORS
39. SULFATE BINDING AND EXTRACTION STUDIES BY A TRIPODAL TRIS THIOUREA RECEPTOR
40. OXALATE DETECTION WITH A NEW MACROCYCLE-BASED DINUCLEAR COPPER(II) COMPLEX
41. COLORIMETRIC AND FLUORESCENCE DETECTION CYANIDE BY INDICATOR DISPLACEMENT ASSAY USING A SIMPLE CU(II) COMPLEX OF 2,2'-DIAMINO-N-METHYLDIETHYLAMINE
42. THEORETICAL STUDIES OF UREA AND THIOUREA-BASED TRIPODAL RECEPTORS FOR ANION BINDING

Friday, February 27

**MORNING Room**  
**TC 218A**

- 8:30 VISUAL SENSING OF ANIONS BY SYNTHETIC RECEPTORS
- 8:45 COLORIMETRIC AND FLUORESCENT SENSING OF CITRATE BY A MACROCYCLE-BASED FOLDED DINUCLEAR COPPER(II) COMPLEX IN WATER
- 9:00 THIOPHENE BASED EXTENDED ACYCLIC AND MACROCYCLIC RECEPTORS FOR ANION BINDING
- 9:15 THE PHOTOCHEMISTRY OF N-SUBSTITUTED HETEROAROMATIC SALTS
- 9:30 STUDENT AWARDS CEREMONY FOR BEST ORAL AND POSTER PRESENTATIONS

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## ECOLOGY AND EVOLUTIONARY BIOLOGY

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Thursday, February 26

### MORNING

Room Union C

- 9:00 HABITAT USE AND SEASONAL FOOD HABITS OF COYOTE (CANIS LATRANS) IN DAHOMEY NATIONAL WILDLIFE REFUGE, MISSISSIPPI
- 9:15 ENERGETICS OF DRY FOREST BIRDS ON THE YUCATAN PENINSULA, MEXICO
- 9:30 TESTING THE "CAVES AS MICROREFUGIA" HYPOTHESIS: PHYLOGEOGRAPHY OF THE FUNNEL-WEB SPIDER EUAGRUS CHISOSEUS IN CENTRAL TEXAS
- 9:45 PREVALANCE OF AVIAN MALARIA IN MOSQUITOES AT ROSS BARNETT RESERVOIR
- 10:00 BREAK
- 10:15 AN ASSESSMENT OF MALARIA PARASITEMIA AND PREVALENCE IN A POPULATION OF TUFTED TITMICE (BAEOLOPHUS BICOLOR)
- 10:30 DISTRIBUTION AND PREVALENCE OF HAEMOSPORIDIAN PARASITES IN THE NORTHERN CARDINAL (CARDINALIS CARDINALIS)
- 10:45 BUSINESS MEETING

Thursday, February 26

### Poster Session (11:00 AM)

1. PLETHODON WEBSTERI IN MISSISSIPPI
2. DIVERSITY OF BIRD SPECIES AT BEAR PEN PARK, CLEVELAND, MISSISSIPPI
3. ADAPTIVE MOVEMENTS AND THERMOREGULATION IN RAFINESQUE'S BIG-EARED BATS
4. INVASIVE SPECIES VERSUS NATIVE SPECIES PRESENT ON DELTA STATE UNIVERSITY CAMPUS IN CLEVELAND, MISSISSIPPI
5. AQUATIC INVERTEBRATE STUDY OF CHRISTMAS LAKE BRANCH, DAHOMEY
6. NATIONAL WILDLIFE REFUGE, BOYLE, MISSISSIPPI
7. RESULTING TOXICITY STUDIES OF THE NEW ORLEANS NINTH WARD THAT WAS SUBMERGED IN HURRICANE KATRINA WATERS
8. TOXICITY ANALYSES OF MISSISSIPPI GULF COAST WATER AND SOIL SAMPLES TAKEN FROM HURRICANE KATRINA ACTIVITIES

Room

Ballroom II/III

- 3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

Friday, February 27

### AFTERNOON

Room TC 228

PANEL DISCUSSION (Joint Presentation with History and Philosophy of Science)

- 2:30 PRACTICAL AND THEORETICAL CONSIDERATIONS FOR METHODS IN BIOLOGY

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## GEOLOGY AND GEOGRAPHY

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Thursday, February 26

### MORNING

Room Union D

- 9:45 EEMIAN/SANGAMONIAN INTERGLACIAL HIGHSTAND AND THE MISSISSIPPI COAST
- 10:00 3D BUILDING EXTRACTION FROM LIDAR DATA FOR ACCURATE DAMAGE ESTIMATION IN CASE OF A NATURAL DISASTER



- 10:15 FIRE AND FUELS IN THE ZUNI MOUNTAINS
- 10:30 BREAK
- 11:00 CHANGES IN WATER QUALITY ACROSS LAND-USE CLASSES ALONG GORDON'S AND GREEN'S CREEKS IN THE HATTIESBURG-PETAL AREA
- 11:15 THE IMPACTS OF SEASONAL FLOODING ON THE MISSISSIPPI DELTA AND FUTURE ADAPTATION MANAGEMENT PLANNING
- 11:30 LUNCH

Thursday, February 26

AFTERNOON  
Room Union D

- 1:15 FLOOD ANOMALY PROXYS IN CLARK LAKE, SHARKEY CO., MISSISSIPPI
- 1:30 ALLUVIAL SEDIMENTATION ASSOCIATED WITH HISTORICAL LOGGING IN LOW GRADIENT WATERSHEDS IN DESOTO NATIONAL FOREST, MISSISSIPPI
- 1:45 BUSINESS MEETING

Room  
Ballroom II/III

- 3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

## HEALTH SCIENCES

Thursday, February 26

MORNING  
Room Ballroom II/III

POPULATION HEALTH SYMPOSIUM -- IMPROVING HEALTH OUTCOMES IN MISSISSIPPI  
FACILITATOR: Claude Brunson, MD

- 8:45 WELCOME AND OPENING REMARKS
- 9:00 KEYNOTE SPEAKER – MARY CURRIER, MD, MPH, STATE HEALTH OFFICER
- 9:45 BREAK
- 10:00 INVITED SPEAKER KRISTI HENDERSON, DNP, CHIEF TELEHEALTH & INNOVATION OFFICER
- 10:30 INVITED SPEAKER MICHAEL FORSTER, PHD, MSW, DEAN, SCHOOL OF PUBLIC HEALTH, USM
- 11:00 DISTINGUISHED PANEL DISCUSSION
- 11:45 MOVEMENT IS LIFE
- 12:00 LUNCH BREAK

Thursday, February 26

AFTERNOON

PARALLEL SESSIONS  
PLENARY SESSION I  
Room TC 214

- 1:00 FROM INDIVIDUAL CARE TO POPULATION HEALTH: INTEGRATING COMMUNITY HEALTH CENTERS AND POPULATION RESEARCH TO IMPROVE MATERNAL-CHILD



**HEALTH OUTCOMES**

- 1:15 A STUDY OF THE RELATIONSHIP BETWEEN THE PRIMARY CARE WORKFORCE AND OBESITY PREVALENCE RATES IN MISSISSIPPI
- 1:30 TOBACCO CONTROL AND PREVENTION INITIATIVES AT MISSISSIPPI HOSPITALS
- 1:45 A PROFILE OF COMMUNITY HEALTH WORKERS IN MISSISSIPPI
- 2:00 CLINICAL COMMUNITY HEALTH WORKER INITIATIVE: IMPROVING HEALTH OUTCOMES WITH A TEAM-BASED APPROACH
- 2:15 DEVELOPMENT OF AN INTERACTIVE, SPATIAL, WEB-BASED TOOL FOR PHYSICIAN WORKFORCE PLANNING, RECRUITMENT, AND RESEARCH
- 2:45 BUSINESS MEETING

**PARALLEL SESSIONS****PLENARY SESSION II****Room TC 227**

- 1:00 ELUCIDATING THE NATURAL HISTORY OF ATHEROSCLEROSIS: THE ATHEROSCLEROSIS RISK IN COMMUNITIES STUDY
- 1:15 HIGH BLOOD PRESSURE AWARENESS IN THE MISSISSIPPI DELTA REGION AMONG BLACKMEN: (BARBERS REACHING OUT TO EDUCATE ON ROUTINE SCREENING)
- 1:30 IMPACT OF EARLY ELECTIVE DELIVERIES ON BIRTH OUTCOMES IN MISSISSIPPI
- 1:45 SOCIO-DEMOGRAPHIC PREDICTORS OF NUTRITIONAL RISK: CROSS SECTIONAL ANALYSES FROM THE UAB STUDY OF AGING II
- 2:00 PUBLIC HIGH SCHOOL FOOTBALL, NOT SOCCER, PROMOTES LINEMEN OBESE BODY MASS INDEX (BMI) TO THE SAME EXTENT IN MISSISSIPPI AS IN LEAN STATES
- 2:15 IDENTIFYING AND REDUCING RACIAL DISPARITIES IN CARDIOVASCULAR DISEASE: THE JACKSON HEART STUDY
- 2:30 BREAK

**Room TC 214**

- 2:45 BUSINESS MEETING

**Room****Ballroom II/III**

- 3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

**EVENING****Poster Session**

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. A SYSTEMATIC REVIEW ON THE EFFECTS OF TRANSCRANIAL MAGNETIC STIMULATION IN PATIENTS WITH NEUROPATHIC PAIN
2. VERRUCA LOCALIZATION PREDOMINATELY IN BLACK TATTOO INK
3. SYNTHETIC CANNABINOIDS SAFETY: A DANGEROUS PERCEPTION AMONG ADOLESCENTS
4. ASSESSING A VASCULAR PHYSIOLOGICAL OPERATING RANGE FOR CARDIOVASCULAR HEALTH: A CLINICAL PERSPECTIVE
5. NORMATIVE VALUES FOR NASALANCE AND RATE OF SPEECH IN THE SOUTHERN DIALECT
6. DETECTING MALINGERING WITH THE MILLER FORENSIC ASSESSMENT OF SYMPTOMS TEST
7. SPATIAL-TEMPORAL ANALYSIS OF INFLUENZA VIRUS IN THE STATE OF MISSISSIPPI
8. HOUSING AND PHYSICAL DISABILITY
9. HOW CAN HEALTHCARE DISPARITIES OF WOMEN BE SOLVED AND HOW CAN THE QUALITY OF LIFE BE EQUITABLE ACROSS GENDER LINES IN AMERICA?
10. ASSESSMENT OF PROVIDER COMPLIANCE WITH PROPHYLACTIC AND THERAPEUTIC TREATMENT RECOMMENDATIONS FOR CARE OF ADOLESCENT VICTIMS OF SEXUAL ASSAULT

11. CHARACTERISTICS OF DENTISTS PRACTICING IN URBAN, LARGE RURAL, SMALL RURAL, AND ISOLATED AREAS OF MISSISSIPPI
12. HUMAN SUBJECTS RESEARCH IN A SOUTHERN ACADEMIC MEDICAL CENTER: ETHICAL OBSERVATIONS ON SELECTED DEMOGRAPHIC CHARACTERISTICS
13. ADDRESSING THE BURDEN OF COLORECTAL CANCER IN MISSISSIPPI
14. CROSS SECTIONAL ANALYSIS OF MATERNAL AND CHILD HEALTH OUTCOMES AMONG PARTICIPANTS OF THE TOUGALOO COLLEGE DELTA HEALTH PARTNERS (TC/DHP) HEALTHY START PROJECT
15. PREDICTORS OF DENTAL CARE SERVICE UTILIZATION AMONG LATINOS IN MISSISSIPPI, LOUISIANA AND ALABAMA
16. SMOKE-FREE ORDINANCE REDUCES HEALTH RISKS FOR EMPLOYEES IN HOSPITALITY VENUES
17. WHAT IS THE RELATIONSHIP BETWEEN OBESITY AND THE PROXIMITY OF FAST FOOD RESTAURANTS?
18. NATIONWIDE POLICY SCAN OF FEDERALLY QUALIFIED HEALTH CENTERS (FQHC)
19. THE RELATIONSHIP BETWEEN MEDICAL MISTRUST AND HIV TESTING BEHAVIORS AMONG AFRICAN AMERICAN MSM IN JACKSON, MISSISSIPPI.
20. THE RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND KNOWLEDGE ABOUT CERVICAL CANCER PREVENTION AMONG AFRICAN AMERICAN WOMEN IN JACKSON, MS
21. HOME AND HEALTH: THE EFFECTS OF NEIGHBORHOOD CHARACTERISTICS ON ACCESS AND UTILIZATION OF HEALTHCARE
22. THE EFFECT OF RELIGIOSITY/SPIRITUALITY ON HIV AND STI INFECTIONS IN AFRICAN AMERICAN MSM
23. OBESITY, BODY IMAGE, AND SELF PERCEPTION: A REVIEW OF SELECT ANTHROPOMETRIC FACTORS & HIV-RISK RELATED BEHAVIORS IN AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN (AAMSM) IN JACKSON, MS.
24. SEX EDUCATION POLICIES IN PUBLIC SCHOOLS: ABSTINENCE-PLUS VS. ABSTINENCE-ONLY
25. EXAMINING STIGMA AMONG HIV POSITIVE PATIENTS: AN ASSESSMENT OF THE PATIENT-PROVIDER RELATIONSHIP
26. EXAMINING THE RELATIONSHIP BETWEEN BODY IMAGE AND HIV SEXUAL RISK FACTORS AMONG AFRICAN AMERICAN MSM IN THE JACKSON, MS MSA
27. EXAMINING THE RELATIONSHIP BETWEEN ACCESS TO RECREATIONAL FACILITIES AND PHYSICAL ACTIVITY AMONG MISSISSIPPIS
28. PRE-EXPOSURE PROPHYLAXIS FOR HIV PREVENTION PROGRAM AT MISSISSIPPI'S FIRST LBGTI CLINIC
29. EBOLA VIRUS DISEASE: SOME FACTS AND COMMENTS ON THE NIGERIAN SITUATION
30. PREVALENCE OF ZONOTIC DISEASES IN DOGS AND CATS BELONGING TO WOMEN ENTERING A REGIONAL DOMESTIC VIOLENCE SHELTER
31. ENGAGING PEOPLE, PROCESSES AND POLICIES TO COMBAT INEQUITIES IN ACCESS TO DIABETES SELF-MANAGEMENT EDUCATION IN RURAL MISSISSIPPI
32. PUTTING THE PIECES TOGETHER TO IMPROVE HEALTH ACCESS
33. TRANSLATING RESEARCH TO PRACTICE IN MISSISSIPPI'S RURAL COMMUNITIES
34. DELTA ALLIANCE FOR CONGREGATIONAL HEALTH: IDENTIFYING AT-RISK AND UNDIAGNOSED INDIVIDUALS THROUGH CONGREGATIONAL HEALTH SCREENINGS
35. PHYSICO-CHEMICAL, MICROBIOLOGICAL, AND SOURCE-TRACKING PARAMETERS OF WATER QUALITY IN THE GRAND BAY NERR IN MISSISSIPPI
36. DYNAMICS OF PROGESTERONE, TNF- $\alpha$  AND A METABOLITE OF PGF<sub>2 $\alpha$</sub>  IN BLOOD PLASMA OF BEEF COWS FOLLOWING EMBRYO TRANSFER
37. HYPERTENSION AND ENDOTHELIN-1 IN AN ANIMAL MODEL OF HELLP SYNDROME
38. ANTI-MYCOBACTERIAL PROPERTIES OF PSEUDOGNAPHALIAM OBTUSIFOLIUM PLANT EXTRACTS
39. MANIPULATION OF THE MACROPHAGE RESPONSE USING AMINO ACID COATED UHMW-PE IMPLANTED SUBCUTANEOUSLY
40. MORPHOMETRIC EVALUATION OF THE TISSUE IMPLANT RESPONSE SURROUNDING SUBCUTANEOUS TCP, HA, AND ALCAP BIOCERAMIC IMPLANTS
41. REGULATION OF GONADOTROPINS BY MEANS OF SUSTAINED DELIVERY OF PROGESTINS USING EWES AS A MODEL
42. USING PHOTOTHERMAL THERAPY FOR SELECTIVE DETECTION AND DESTRUCTION OF CANCER CELLS
43. EVALUATION OF ADENOCARCINOMA HUMAN ALVEOLAR BASAL EPITHELIAL CELL



- LINE UPON THE EXPOSURE TO OMEGA FATTY ACIDS IN CULTURE
44. THE EFFECTS OF EXPOSING COMBINATIONS OF DENTAL ADHESIVES, PORPHYROMONAS GINGIVALIS LIPOPOLYSACCHARIDES, AND CORTISOL OR NIFEDIPINE TO HUMAN GINGIVAL FIBROBLASTS
  45. PARACRINE SIGNALING IS KEY FOR MELANOMA CELL MIGRATION
  46. CHRONIC CARBON MONOXIDE TREATMENT ATTENUATES DEVELOPMENT OF OBESITY AND REMODELS ADIPOCYTES IN MICE FED A HIGH-FAT DIET.
  47. AN AQUATIC FULBRIGHT EXPERIENCE IN THAILAND
  48. NUCLEAR RADIATIONS AND HUMAN EXPOSURE
  49. SODIUM INTAKE AND ARTERIAL PRESSURE IN NORMOTENSIVE AND DOCA-SALT HYPERTENSIVE RATS DURING CHRONIC MINOXIDIL TREATMENT
  50. STRUCTURE ELUCIDATION OF G-QUADRUPLEX WITHIN THE MID-REGION OF THE KRAS PROMOTER AND IDENTIFICATION OF STABILIZING SMALL MOLECULES AS PROMISING TRANSCRIPTIONAL SILENCERS
  51. THE EFFECTIVENESS OF ANTI-OXIDANTS AGENTS TO POTENTIATE THE PHYSIOLOGICAL RESPONSE OF INSULIN HORMONE USING PANC-1 PANCREATIC LIKE CELL LINE AS A MODEL
  52. PROLIFERATION OF ENDOGENOUS T-REG CELLS IMPROVES THE PATHO-PHYSIOLOGY ASSOCIATED WITH PLACENTAL ISCHEMIA OF PREGNANCY
  53. SUPRA-ADDITIVE EFFECTS OF BENZODIAZEPINE AND NEUROACTIVE STEROID COMBINATIONS ON SCHEDULE-CONTROLLED BEHAVIOR IN RATS
  54. ANTINOCICEPTIVE EFFICACY OF CHRONIC FLUOXETINE TREATMENT
  55. CHARACTERISTICS OF PHYSICIANS PRACTICING IN URBAN, RURAL, AND ISOLATED AREAS IN MISSISSIPPI

Friday, February 27

MORNING

Room TC 227

PARALLEL SESSIONS

PLENARY SESSIONS III

- |      |  |
|------|--|
| 8:15 | OPENING REMARK   |
| 8:30 | ACUPUNCTURE AND PRURITUS   |
| 8:45 | INFLAMMATORY BIOMARKERS AND BLOOD PRESSURE VARIABILITY: THE GENETIC EPIDEMIOLOGY NETWORK OF ARTERIOPATHY   |
| 9:00 | HIPPOCAMPAL VOLUME IS ASSOCIATED WITH VERBAL MEMORY PERFORMANCE IN OLDER, BUT NOT YOUNGER ADULTS   |
| 9:15 | COMPARISON OF CEA, NSE, AND CYFRA 21-1 FOR THE SERODIAGNOSIS OF LUNG CANCER  |
| 9:30 | EFFECTS OF ENDOTHELIN-A RECEPTOR AND ANGIOTENSIN CONVERTING ENZYME INHIBITION ON THE DEVELOPMENT OF PROGRESSIVE PROTEINURIA IN DIABETIC DAHL SS RATS WITH PRE-EXISTING RENAL DISEASE |
| 9:45 | POST RENAL TRANSPLANTATION DIABETES MELLITUS IN RELATION TO CORTICOSTEROID DOSING  |

Friday, February 27

MORNING

Room TC 229

PARALLEL SESSIONS

PLENARY SESSIONS IV

- |      |   |
|------|---|
| 8:15 | OPENING REMARKS   |
| 8:30 | DICHLOROMETHANE-DERIVED PSEUDOGNAPHALIMUM OBTUSIFOLIUM EXTRACT DECREASES PROLIFERATION OF BREAST DUCTAL EPITHELIAL ADENOCARCINOMA CELL LINE |

- 8:45 EFFECTS WHOLE LEAF PSEUDOGNAPHALIUM OBTUSIFOLUM CHEMICAL EXTRACTS ON PROLIFERATION OF MCF7 ADENOCARCINOMA CELLS
- 9:00 TRICHOMONAS VAGINALIS VIRUS IN 8 ATCC CELL LINES
- 9:15 REGRESSION OF FUNCTIONAL CAPACITY OF SK-OV-3 OVARIAN CANCER LIKE CELL LINE BY SUSTAINED DELIVERY OF TQ AND EGCG
- 9:30 KILLING CANCER NATURALLY
- 9:45 BIOLOGICAL EFFECTS OF NUCLEAR RADIATIONS
- 10:00 BREAK

**Poster Session II (Undergraduate and High School (10:00-12:00))**

56. RATS WITH HYPERTENSION, HEMOLYSIS ELEVATED LIVER ENZYMES AND LOW PLATELETS (HELLP) HAVE INCREASED PLACENTAL AND FASL
57. EVALUATION OF THE ANTI-MYCOBACTERIAL PROPERTIES OF P. OBTUSIFOLIUM PLANT EXTRACTS
58. ADMINISTRATION OF ANTI-INFLAMMATORY CYTOKINE AMELIORATES BRAIN INFLAMMATION AND IMPROVES NEUROBEHAVIORAL PERFORMANCE IN JUVENILE RATS FOLLOWING NEONATAL EXPOSURE TO LIPOPOLYSACCHARIDE
59. NANOTECHNOLOGY-BASED APPROACH TO IMPROVE FERTILITY OUTCOMES IN SWINE
60. TRICHOMONAS VAGINALIS VIRUS TREATMENT WITH RIBAVIRIN
61. EVALUATION OF ANTI-MYCOBACTERIAL AGENTS USING MYCOBACTERIUM SMEGMATIS
62. THE EFFECT OF SELENOMETHIONE ON COX-2 EXPRESSING CELL LINES
63. THE EFFECT OF SELENOMETHIONE IN COMBINATION WITH DOXORUBICIN ON COX-2 EXPRESSING CANCER CELL LINES
64. FOOTBALL MOUTHPIECE MICROBIOTA
65. THE EFFECTS OF INCREASED EXPOSURE TO UVC LIGHT ON HUMAN SKIN MICROBIOTA
66. OUTBREAK TRACKING: PSEUDOMONAS AERGINOSA IN A NEWBORN INTENSIVE CARE UNIT
67. GROWTH AND CELL VIABILITY OF SKOV-3 CELLS FOLLOWING TREATMENT WITH INOSITOL 6 PHOSPHATE.
68. THE EFFECTS OF OMEGA 3 FATTY ACIDS ON SKOV-3 CELLS
69. CAN NONSTEROIDAL ANTI-INFLAMMATORY DRUGS IN COMBINATION WITH 5-FU ENHANCE APOPTOSIS IN FADU?
70. THE EFFECT OF CAPTOPRIL AND ANGIOTENSIN ON THE HUMAN CARCINOMA A549 CELL LINE IS THE
71. IS THE CUP HALF EMPTY OR HALF FULL: FALSE NEGATIVE IMMUNOASSAY SCREENING FOR METHAMPHETAMINE
72. SPECIFIC ANTIOXIDANT, PTEROSTILBENE, FAILS TO REDUCE BLOOD PRESSURE IN FEMALE SPONTANEOUSLY HYPERTENSIVE RATS.
73. T CELL-DEPENDENT B CELL ACTIVATION PLAYS A ROLE IN MEDIATING HYPERTENSION AND PATHOPHYSIOLOGY IN RESPONSE TO CD4+ T CELLS FROM REDUCED UTERINE PERFUSION PREGNANT RATS
74. NOISE EXPOSURE RESULTS IN VESTIBULAR DEFICITS IN RATS
75. ANTI-INFLAMMATORY CYTOKINE INTERLEUKIN-1 RECEPTOR ANTAGONIST ATTENUATES LIPOPOLYSACCHARIDE-INDUCED NEUROBEHAVIORAL DEFICITS AND BRAIN INFLAMMATION IN NEONATAL RATS
76. INFLAMMATION HYPEROXIA AND WHITE MATTER INJURY
77. EFFECTS OF BENZODIAZEPINE ON SLEEP AND HOMEOSTASIS IN ADULT RATS
78. IN SILICO ANALYSIS OF EBOLAVIRUS EVOLUTION
79. TREATMENT DEPTH EFFECTS OF THE ZAVATION LUMBAR BONE GROWTH STIMULATOR
80. HYPERTENSION DURING PREGNANCY IS ASSOCIATED WITH NEUROINFLAMMATION

**10:00-12:00 GRADUATE SYMPOSIUM****1:30-3:00 UNDERGRADUATE SYMPOSIUM**



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## HISTORY AND PHILOSOPHY OF SCIENCE

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Thursday, February 26

**MORNING**

**Room TC 228**

- 9:30 IS THE SCIENCE OF PSYCHOLOGY REDUCIBLE TO NEUROSCIENCE?**  
**10:00 A NETWORK THEORY OF WILL-POWER**
- 10:30 BREAK**
- 10:45 A CRITIQUE OF DAVID LEWIS' "MAD PAIN AND MARTIAN PAIN"**  
**11:15 DO ENVIRONMENTAL SCIENCE ADVISERS REPRESENT THE THREAT OF A TECHNOCRACY?**
- 11:45 BREAK**

Thursday, February 26

**AFTERNOON**

**Room TC 228**

- 1:00 BLOCKING THE PESSIMISTIC META-INDUCTION: A REFUGE FOR REALISM**  
**1:30 DIVISIONAL BUSINESS MEETING**  
**2:00 NO HIDDEN VARIABLES: FROM NEUMANN'S TO KOCHEN AND SPECKER'S THEOREM IN QUANTUM MECHANICS**  
**2:30 SEEING IS BELIEVING; IT'S INTUITIVELY OBVIOUS!**

**Room**

**Ballroom II/III**

- 3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION**

Friday, February 27

**MORNING**

**Room TC 228**

- 9:00 BIOLOGICAL ENTITIES AND PERSISTENCE OVER TIME: BIOLOGICAL INDIVIDUALITY AND THE ORGANISM PROBLEM**  
**9:30 THE AESTHETICS OF SCIENTIFIC REPRESENTATION OF THE HISTORY AND DIVERSITY OF LIFE ON EARTH**  
**10:00 THE PERSISTENCE OF THE "STORM IN A TEACUP"**

**10:30 BREAK**

**AFTERNOON**

**Room TC 228**

- 12:30 JOHN HERSHEL, WILLIAM WHEWELL, AND NINETEENTH CENTURY ROOTS OF SCIENTIFIC METHOD**



- 1:00 VICTORIAN SCIENCE: THE MILIEU IN WHICH IT WAS BORN, THE MODERNITY INTO WHICH IT EVOLVED
- 1:30 PHILOSOPHY OF HENNIG'S PHYLOGENETIC SYSTEMATICS
- 2:00 BREAK
- PANEL DISCUSSION (Joint presentation with Ecology and Evolutionary Biology)
- 2:30 PRACTICAL AND THEORETICAL CONSIDERATIONS FOR METHODS IN BIOLOGY

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## MARINE AND ATMOSPHERIC SCIENCES

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Thursday, February 26

### MORNING

Room TC 227

- 9:00 (Invited Talk) GIS TOOL FOR ASSESSMENT OF QUARTERLY AIR POLLUTION EXPOSURE AND ITS ASSOCIATION WITH ASTHMA IN EASTERN TEXAS STATE
- 9:30 A SPATIAL ANALYSIS OF TORNADO SIRENS IN MISSISSIPPI
- 9:45 SURFACE THERMODYNAMIC CONDITIONS OF MISSISSIPPI SEA BREEZE ENVIRONMENTS
- 10:00 ENVIRONMENTAL WATER QUALITY OF THE PEARL RIVER AND HEALTH EFFECTS
- 10:15 BREAK
- 10:30 MODELING OVERFILTRATION OF MARINE PATHOGENS
- 10:45 GIS ANALYSIS OF TORNADO EVENTS IN MISSISSIPPI
- 11:00 ENVIRONMENTAL MODELING AND PREDICTION FOR CLIMATE AND SEASONAL FLUCTUATIONS OVER GRANDBAY OF GULF OF MEXICO
- 11:15 BUSINESS MEETING

### AFTERNOON

Room

Ballroom II/III

- 3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

### EVENING

Poster Session

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. IMPACTS OF SAHARAN DUST TRANSPORT OVER ATLANTIC ON PARTICULATE MATTER, OZONE AND HEALTH EFFECTS
2. ASSESSMENT AND SPATIAL VARIATION ANALYSIS OF WATER QUALITY IN GRAND BAY NATIONAL ESTUARINE RESEARCH RESERVE
3. EPIZOOTIOLOGICAL MODELING OF MARINE INFECTIOUS DISEASE
4. ADVANCE WATER QUALITY MODELING ON OYSTER RESTORATION AT THE NORTHERN GULF OF MEXICO




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## MATHEMATICS, COMPUTER SCIENCE AND STATISTICS

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Thursday, February 26

### MORNING Room

TC 229

9:00 SYMPOSIUM

STEM, PROJECT-BASED LEARNING: STRATEGIES AND EXPERIENCES IN THE CLASSROOM

10:00 BREAK

10:30 FLOOD EXTENT SIMULATION: A GEOGRAPHIC INFORMATION SYSTEM (GIS) RIVER FLOODING EXTENT APPROACH

10:50 PROJECT MANAGEMENT FRAMEWORK FOR CLOUD AND HPC RESOURCE PROVIDERS

11:10 DEVELOPING A WEB-BASED INTERFACE TO EVALUATE DOWNSCALED GFS PRODUCTS

11:30 DESIGN OF AN ALGORITHMS FOR BIOINFORMATICS COURSE FOR COMPUTER SCIENCE MAJORS

11:50 BREAK

Thursday, February 26

### AFTERNOON

Room TC 229

1:20 OPENING REMARKS

1:30 MONTE CARLO SIMULATION USING DETERMINISTIC BEHAVIOR: AREA PROBLEM

1:50 TRANSFORMING DATA INTO INFORMATION TO SUPPORT EVIDENCE-BASED DECISION MAKING

2:10 D WAVELET FEATURE EXTRACTION AND APPLIED TO FRUIT BRUISE DETECTION

2:30 BUSINESS MEETING

### Room

Ballroom II/III

3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

### EVENING

Poster Session

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. ENHANCING PARENT INVOLVEMENT IN NC-CCSS FOR K-2 MATHEMATICS
2. USING A MATLAB/PHOTOSHOP INTERFACE TO ENHANCE IMAGE PROCESSING IN THE INTERPRETATION OF RADAR IMAGERY
3. TOWARDS ONLINE TEACHING OF ELECTRICAL AND COMPUTER ENGINEERING LABORATORIES
4. IMPLEMENTATION OF AN ARBITRARY PRECISION INTEGER ARITHMETIC PACKAGE
5. ADDING FUNCTIONALITY TO FREEMAT: IMPLEMENTING *ode45rev* FUNCTION TO SOLVE SYSTEMS OF ORDINARY DIFFERENTIAL EQUATIONS



Friday, February 27

MORNING

Room TC 226

9:00-10:00

**WORKSHOP  
CHOICE OF STATISTICAL TECHNIQUES:  
PARAMETRIC VERSUS NON PARAMETRIC METHODS**

**PHYSICS AND ENGINEERING**

Thursday, February 26

MORNING

Room TC 218 B

- 8:30 DIRECT VISUALIZATION OF SHEAR WAVE IN MICELLAR FLUID
- 8:45 EFFECT OF FLUORINATION TREATMENT ON THE HYDROLYTIC DEGRADATION RESISTANCE OF Y-TZP
- 9:00 AN INVESTIGATION OF WIND-GROUND COUPLING
- 9:15 COMPUTING OF ULTRASONIC PRESSURE FIELDS IN FELINE BRAIN

9:30 BREAK

- 9:45 ON THE NATURE OF HIGH FREQUENCY LOCALIZED VIBRATIONS IN HYDROGENATED AMORPHOUS SILICON: A FIRST-PRINCIPLES STUDY
- 10:00 STRUCTURAL MODELING OF AMORPHOUS GRAPHENE: A FIRST-PRINCIPLES APPROACH
- 10:15 COMPARATIVE STUDY OF SATURATION EFFECT IN LASER INDUCED BREAKDOWN SPECTROSCOPY (LIBS) AND LASER INDUCED MOLECULAR EMISSION SPECTROSCOPY (LIMES)
- 10:30 RADIAL OSCILLATIONS OF A GAS BUBBLE VIA CANONICAL PERTURBATION THEORY: FREQUENCY EXPANSION TO FOURTH ORDER

10:45 BREAK

- 11:00 NEW PHYSICS EFFECTS ON DEEP INELASTIC TAU NEUTRINO SCATTERING THROUGH CHARGED CURRENT
- 11:15 SEMI-LEPTONIC DECAY RATE OF  $\Lambda_b \rightarrow \Lambda_c \tau \bar{\nu}_\tau$
- 11:30 EXACT DIAGONALIZATION OF FRUSTRATED QUANTUM SPIN CHAINS
- 11:45 MASS TREND ANALYSIS OF THE AME2003 WHICH ASSUMES CLUSTERING LEADS TO AN EMPIRICAL MASS FORMULA THAT IMPROVES ON THE SEMI-EMPIRICAL MASS FORMULA, PARTICULARLY FOR N = Z NUCLEI

12:00-1:30 BUSINESS MEETING

AFTERNOON

Room TC 218B

- 1:30 NOVEL TESLA-TYPE HEAT EXCHANGERS FOR MICROFLUIDIC APPLICATIONS
- 1:45 HORMONE INDEPENDENT PROTEIN TARGETS & DRUG DESIGNING FOR BREAST AND PROSTATE CANCERS

2:00 BREAK

- 2:15 DEVELOPMENT OF A REMOTE LABORATORY
- 2:30 POPULATION MONITORING AFTER RADIATION INCIDENT
- 2:45 STUDY OF (NORM) RADIONUCLIDES IN FARM RAISED CATFISH IN STATE MISSISSIPPI (MS)

Room

Ballroom II/III

3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

Poster Session Immediately Following Dodgen Lecture



**EVENING****Poster Session**

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. FETUIN-A THERAPY: A NEW APPROACH FOR THE TREATMENT OF VASCULAR CALCIFICATION
2. MONTE CARLO SIMULATION OF THE MISSISSIPPI STATE AXION SEARCH
3. CHARACTERIZING AND ANALYZING HAMMAMATSU MULTIANODE PHOTO MULTIPLIER TUBES FOR USE IN THE RICH DETECTOR IN THE JEFFERSON LAB HALL B CLAS 12 SPECTROMETER.
4. NOVEL TREATMENT OF OSTEOSARCOMA VIA MAGNETIC NANOPARTICLES
5. MICROSTRUCTURAL CHANGES OF PORCINE LUNG PARENCHYMA UNDER COMPRESSIVE LOADING
6. REPORTING ON THE A=74 CHAIN IN THE BETA DECAY OF Z=29-31

Friday, February 27

**MORNING**

Room TC 218 B

- 9:00 HIGH TEMPERATURE RESONANT ULTRASOUND SPECTROSCOPY STUDY ON LEAD MAGNESIUM NIOBATE - LEAD TITANATE (PMN-PT) RELAXOR FERROELECTRIC MATERIAL
- 9:15 ULTRASONIC BAND GAPS IN TWO-DIMENSIONAL PHONONIC METAMATERIALS WITH PERIODIC ARRAYS OF COPPER RODS
- 9:30 AN ASSESSMENT OF THE ANGULAR SPECTRUM METHOD FOR THE PROPAGATION OF
- 9:45 ULTRASONIC FIELDSOMPUTING OF ULTRASONIC PRESSURE FIELDS IN FELINE BRAIN SHEAR WAVES IN VISCOELASTIC WORMLIKE MICELLAR FLUIDS
- 10:00 ACOUSTICAL MEMORY IN A YZ-CUT LITHIUM NIOBATE PLATE
- 10:15 STUDY OF SrCl SPECTRA BY LASER INDUCED BREAKDOWN SPECTROSCOPY (LIBS)

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## PSYCHOLOGY AND SOCIAL SCIENCES

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Thursday, February 26

**MORNING**

Room Ballroom II/III

- 9:00-11:00 POPULATION HEALTH SYMPOSIUM -- IMPROVING HEALTH OUTCOMES IN MISSISSIPPI

**MORNING**

Room TC 226

- 11:00 CULTURAL CONSIDERATIONS TO SUICIDE ATTEMPTS OF AFRICAN AMERICANS: THE POSTULATION OF CREATING A CULTURE SPECIFIC RISK ASSESSMENT
- 11:15 EFFECT OF PERCEIVED GRANDPARENTAL ACCEPTANCE ON AFRICAN AMERICAN STUDENTS
- 11:30 ASSESSMENT OF PSYCHOLOGICAL RESILIENCE TO COASTAL DISASTERS
- 11:45 RACIAL IDENTITY, RACIAL DISCRIMINATION AND PERCIEVED STRESS AMONG AFRICAN AMERICAN COLLEGE STUDENT
- 12:00 BREAK
- 1:00 THE ATTITUDES TOWARD PLEDGING AMONG AFRICAN AMERICAN GREEK AND NON-GREEK AFFILIATES
- 1:15 BIRTH ORDER EFFECTS ON PERSONALITY AMONG AFRICAN AMERICAN COLLEGE STUDENTS
- 1:30 RACE AND PERCEPTION OF POLICE MISCONDUCT AND CONFIDENCE IN THE POLICE
- 1:45 LOCUS OF CONTROL AND GENDER AMONG AFRICAN AMERICAN COLLEGE STUDENTS
- 2:00 SOCIAL ANXIETY AND CONFLICT IN ROMANTIC RELATIONSHIPS



2:15 SOCIAL ANXIETY PSYCHOLOGICAL EFFECTS OF RELOCATED DARFUR GENOCIDE SURVIVAL

2:30 DIVISION BUSINESS MEETING

Ballroom II/III

3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

**EVENING**

Poster Session

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. THE RELATIONSHIP BETWEEN PERSONALITY AND METACOMPREHENSION ACCURACY
2. DETECTING MALINGERING BY THE MILLER FORENSIC ASSESSMENT OF SYMPTOMS TEST
3. PERSISTENT NEGATIVE EFFECTS OF ALCOHOL DRINKING ON NOVEL OBJECT RECOGNITION IN RHESUS MACAQUES
4. USING GIS TO STUDY THE IMPACT OF NATURAL DISASTERS IN MISSISSIPPI AND HOW IT DISPROPORTIONATELY AFFECTS DIFFERENT DEMOGRAPHIC GROUPS
5. WEIGHT STIGMA AND REGIONAL LOCATION: SURPRISING CORRELATIONS

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## SCIENCE EDUCATION

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Thursday, February 26

**EVENING**

Room

Ballroom II/III

3:15 DODGEN LECTURE AND MEMBERSHIP RECOGNITION

**EVENING**

Poster Session

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

1. BE SMART, BE ACTIVE, BE A LEADER: A HEALTH SCIENCE EDUCATION CURRICULUM AND INSTRUCTIONAL MATERIALS FOR EARLY CHILDHOOD CLASSROOMS IN MISSISSIPPI

Friday, February 27

**FRIDAY AFTERNOON**

Room TC 210

- 1:00 STUDENT PERCEPTIONS OF THE RECEIVED CURRICULUM: THE RELEVANCE AND USEFULNESS OF HIGH SCHOOL BIOLOGY
- 1:15 OPTIMIZATION OF ONLINE DISCUSSION FORUMS FOR STUDENTS' CLIMATE LITERACY
- 1:30 SENSE OF PLACE WRITING TEMPLATES: INTEGRATION OF FORMATIVE SCIENCE ASSESSMENTS, STUDENT EXPERIENCES, AND COMMON CORE ENGLISH LANGUAGE ARTS STANDARDS
- 1:45 IMPLICATIONS OF DEGREE MODIFICATION AND AN INNOVATIVE SCIENCE ARTIFACTS PORTFOLIO IN SECONDARY SCIENCE EDUCATION PROGRAM
- 2:00 USING ARGUMENTATION AND DISCREPANT EVENTS TO INCREASE STUDENT INTEREST IN THE BIOLOGICAL SCIENCES
- 2:15 COMMUNITY SERVICE SHADOW-EDUCATION PROJECTS AND ACTIVITIES TO REINFORCE BASIC SCIENCE PRINCIPLES
- 2:30 BREAK
- 2:45 TEACHER'S PERCEIVED BENEFITS AND BARRIERS TO HANDS-ON PERFORMANCE TASKS




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**IN THE SCIENCE CLASSROOM**

- 3:00** WORKSHOP FOR PRE-SERVICE TEACHERS TO DEVELOP UNDERSTANDING OF THE ROLE OF INQUIRY AND PLACE-BASED INSTRUCTION IN ENVIRONMENTAL EDUCATION
- 3:15** UTILIZING MULTIMEDIA PRE-TRAINING AND AN INTERACTIVE ENZYME MODEL TO FOSTER UNDERSTANDING OF SUBSTRATE SPECIFICITY OF ENZYMES
- 3:30** MISSISSIPPI SCIENCE TEACHERS UTILIZING THE COOPERATIVE TEACHING MODEL TO INCREASE PERCEPTIONS OF EFFECTIVE COMMUNICATION METHODS AMONG STEM GRADUATE STUDENTS
- 3:45** A CALL FOR DIFFERENTIATED INSTRUCTION TO BE A NORMAL COMPONENT OF PROFESSIONAL DEVELOPMENT

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**ZOOLOGY AND ENTOMOLOGY**


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Thursday, February 26

**MORNING****Room Union H**

- 9:00** COMPARATIVE ANALYSIS OF QPCR AND DDPCR METHODS FOR QUANTIFICATION OF BACTERIAL LOAD IN TICK TISSUES
- 9:15** PENTATRICOPEPTIDE REPEAT PROTEINS AND MITOCHONDRIAL RIBOSOMES
- 9:30** STUDIES ON THE DISTRIBUTION OF POLLUTANTS IN THE LOWER MISSISSIPPI RIVER IN PORT GIBSON AREA AND ALCORN STATE UNIVERSITY (ASU) POND NEAR MEDGAR EVERS WILEY VILLAGE DORMITORY DURING THE SPRING AND SUMMER OF 2014
- 9:45** A COMPARATIVE STUDY ON THE SEASONAL DISTRIBUTION OF POLLUTANTS IN TWO BODIES OF LOTIC WATER, MUD ISLAND CREEK AND COLES CREEK
- 10:00** ECOLOGICAL SERVICE OF CAVITY DWELLING BIRDS
- 10:15** NATAL ENVIRONMENT EFFECTS ON FEMALE SIZE, EGG SIZE AND EGG NUMBER IN CONTAINER-INHABITING MOSQUITOES
- 10:30** NATAL ENVIRONMENT EFFECTS ON FEMALE SIZE, EGG NUMBER AND EGG VOLUME IN CONTAINER-INHABITING MOSQUITOES
- 11:00** BUSINESS MEETING

Thursday, February 26

**Room****Ballroom II/III**

- 3:15** DODGEN LECTURE AND MEMBERSHIP RECOGNITION

**EVENING****Poster Session**

Immediately Following Dodgen Lecture (location and set-up time will be posted on-line at [www.msacad.org](http://www.msacad.org))

- 1. COMPARATIVE TOXICITY OF PYRETHROID INSECTICIDES TO SQUASH BUG**
- 2. EFFECTS OF HUMAN INTERACTION OF SQUIRRELS IN MISSISSIPPI RIVER DELTA**
- 3. SOCIAL ASPECTS OF BASKING BEHAVIOR IN FRESHWATER TURTLES**
- 4. ALTERNATIVE MATERIAL NEST BOXES AND IMPACTS ON NESTING PHYSIOLOGY AND ADULT BEHAVIOR IN THE EASTERN BLUEBIRD**
- 5. ROLE OF PENTATRICOPEPTIDE REPEAT MOTIFS ON PROTEIN-RNA INTERACTIONS**
- 6. ASSEMBLY OF MITOCHONDRIAL RIBOSOMES**
- 7. INVESTIGATION OF WATER QUALITY OF ROSS BARNETT RESERVOIR, MISSISSIPPI, USA**
- 8. ECOLOGICAL SIGNIFICANCES OF CLIMATE CHANGE**

## Key to Abbreviations

O = Oral Presentation

P = Poster Presentation

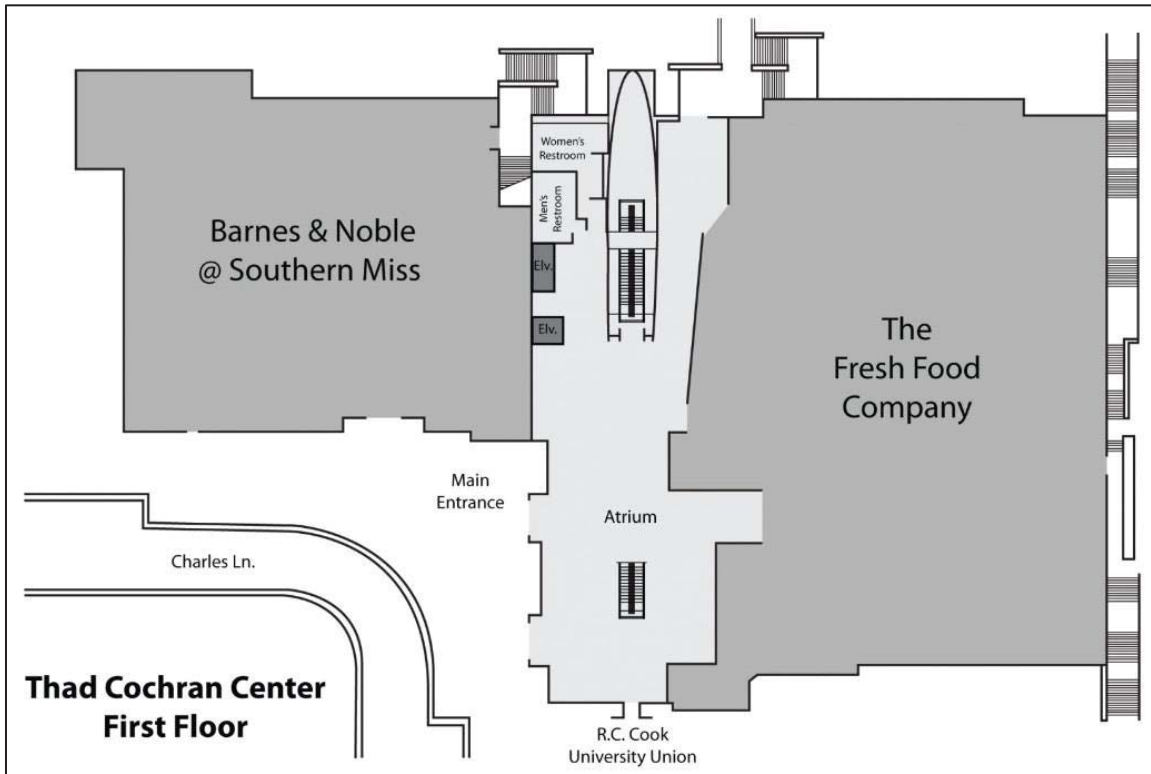
1<sup>st</sup> number is Division

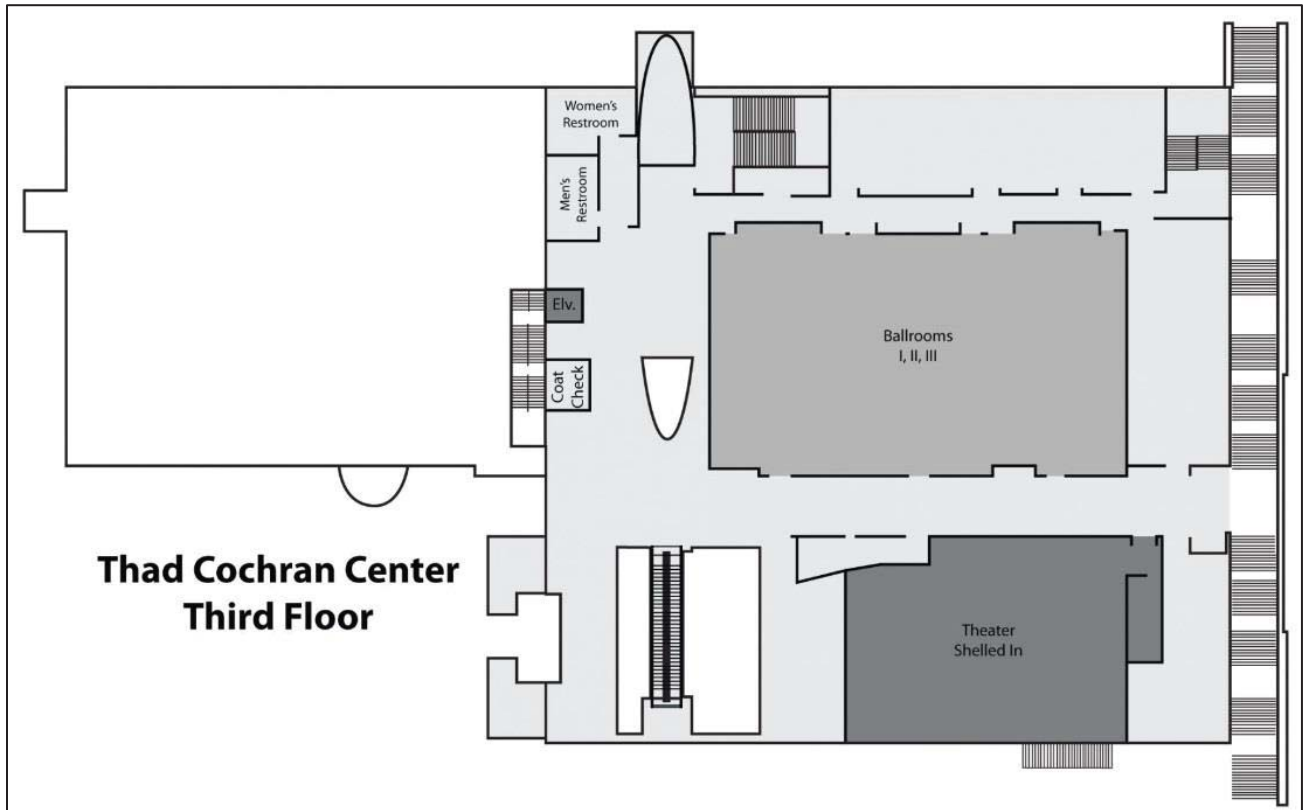
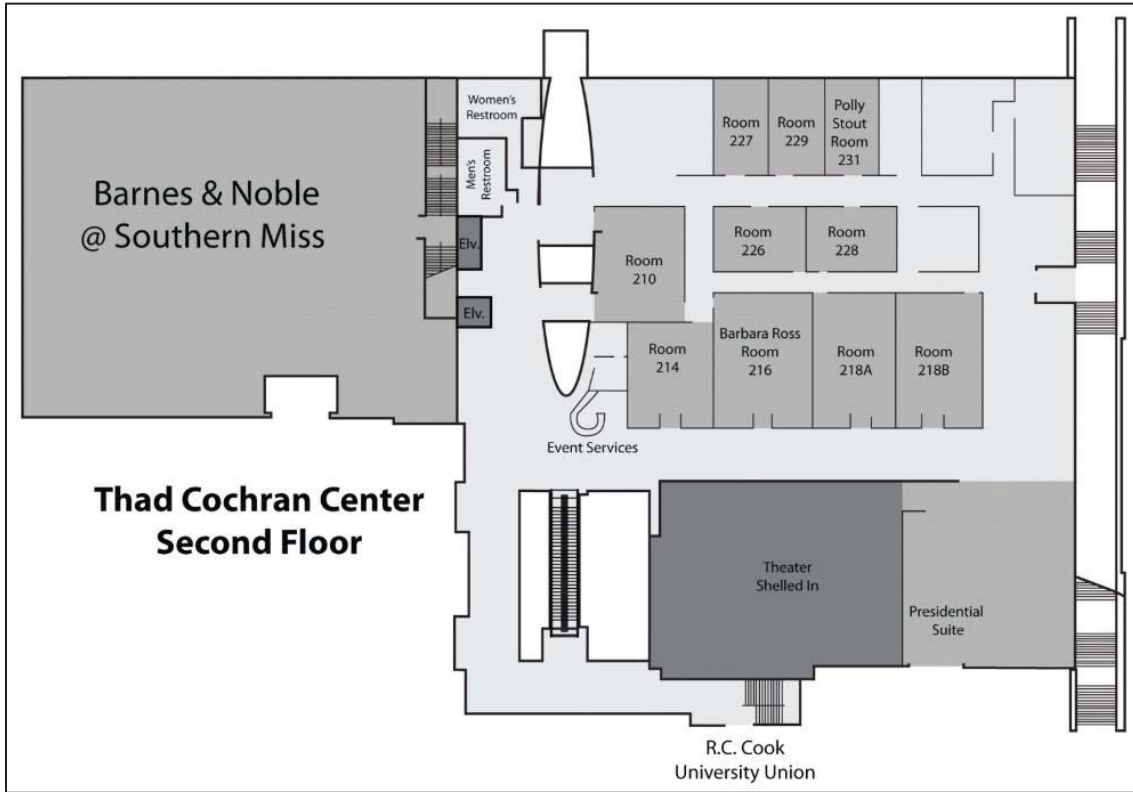
- 1 Agriculture and Plant Science (pages,
- 2 Cellular, Molecular, and Developmental Biology
- 3 Chemistry and Chemical Engineering
- 4 Ecology and Evolutionary Biology
- 5 Geology and Geography
- 6 Health Sciences
- 7 History and Philosophy of Science
- 8 Marine and Atmospheric Sciences
- 9 Mathematics, Computer Science, and Statistics
- 10 Physics and Engineering
- 11 Psychology and Social Sciences
- 12 Science Education
- 13 Zoology and Entomology

2<sup>nd</sup> number is Abstract Number within oral presentations or poster session

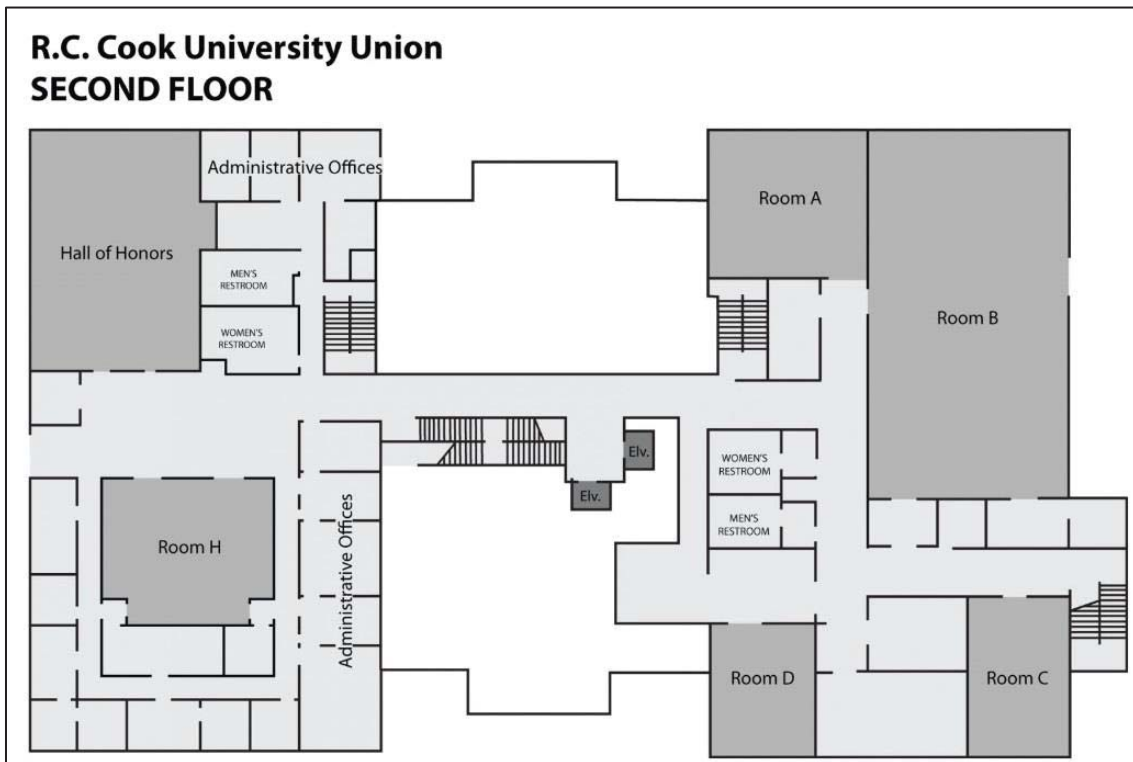
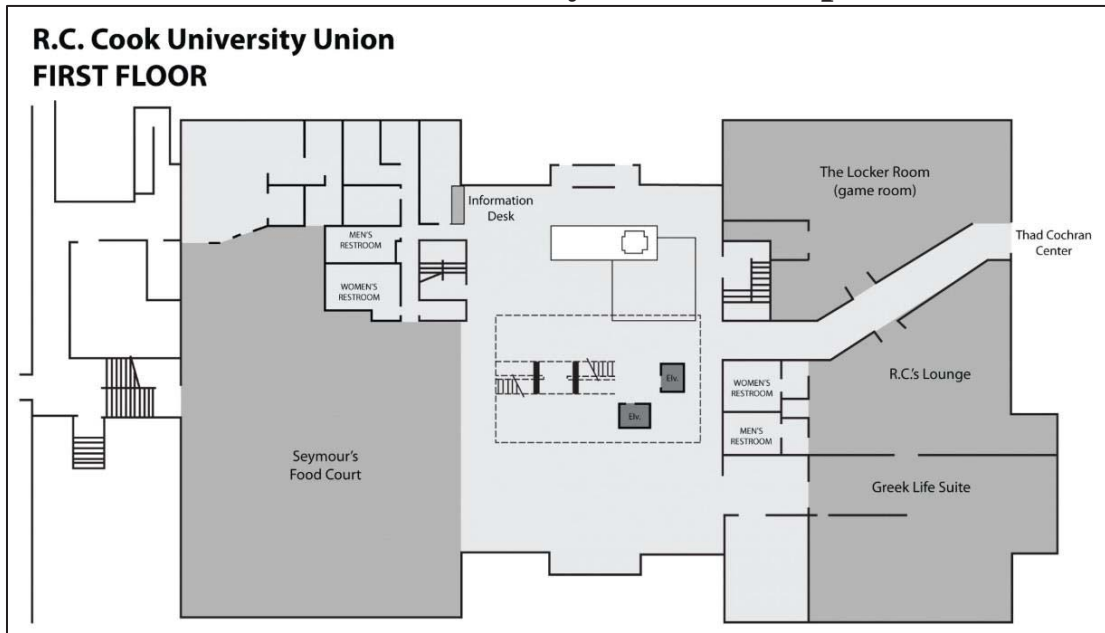
Eg., O3.04 = oral presentation (O) number 4 in the division of Chemistry and Chemical Engineering (3)

## Thad Cochran Center Floorplans





## R.C. Cook University Union Floorplans



## Mississippi INBRE Bioinformatics Symposium

### Big Data (BD2K) to Knowledge – Pitfall, Progress, and Future

Thursday, February 26, 2015, Time 9:30 AM to 12:00 PM, Location TC 214

Organizer: Dr. Shahid Karim

Department of Biological Sciences, University of Southern Mississippi

#### 9:30-9:35: Welcoming remarks



9:35-10:00

**Dr. Bindu Nanduri**

College of Veterinary Medicine,  
Mississippi State University

**“Big Data, Bioinformatics and No-Boundary Thinking”**



10:00-10:25

**Dr. Joe Zhang**

School of Computing, University of  
Southern Mississippi

**“Data Mining and Biological Network Analysis”**



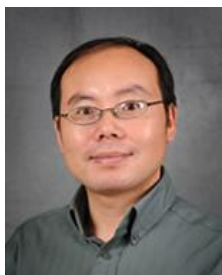
10:25-10:50

**Dr. Deepak Kaushal**

Tulane National Primate Center

**“Intrgranulomatous transcriptomics of *Mycobacterium tuberculosis* infection in a human-like model”**

#### 10:50-11:00: BREAK



11:00-11:25

**Dr. Henry X-F. Wan**

Department of Basic Sciences, College of  
Veterinary Sciences, College of Medicine,  
Mississippi State University

**“Emerging opportunities and challenges of Big Data to Knowledge in influenza vaccine strain selection”**



11:25-11:50

**Dr. Alex Flynt**

Department of Biological Sciences,  
University of Southern Mississippi

**“Small RNAome of mites”**

#### 11:50-12:00: Concluding remarks