

97th ANNUAL TECHNICAL MEETING
OKLAHOMA ACADEMY OF SCIENCE
SOUTHERN NAZARENE UNIVERSITY

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97th ANNUAL TECHNICAL MEETING
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PROGRAM SUMMARY

Thursday, 30 October 2008

6:30 p.m.	Executive Council Dinner and Meeting	President's Dining Room Webster Commons
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Friday, 31 October 2008

7:30 a.m. - 10:00 a.m.	Registration for Technical Meeting	East Lobby Beaver Science Building
8:30 a.m. - 11:00 a.m.	Concurrent Scientific Paper Sessions	Beaver Science Building

Section A	Biological Sciences – Botany	Room 300
Section A	Biological Sciences – Zoology	Room 102
Section B	Geology	not meeting
Section C	Physical Sciences	Room 109
Section D	Social Sciences	Room 408
Section E	Science Education	Room 107
Section F	Geography	Room 305
Section G	Fish and Wildlife Conservation	Room 010
Section H	Microbiology	Room 400
Section I	Engineering Sciences	Room 402
Section J	Biochemistry and Biophysics	Room
405A		
Section K	Microscopy	Room 410
Section L	Mathematics, Computer Science, and Statistics	Room 201
Section M	Environmental Sciences	Room 304
Section N	Biomedical Sciences	Room 200
All Sections	Posters	West Lobby

11:00 a.m.	Section Meetings	Meeting Rooms Above
	Election of Section Vice-Chair.	
	[Provide this information to Dr. David Bass at the check-in desk before leaving.]	

11:30 a.m.	Academy Business Meeting	Auditorium (Room 102) Beaver Science Building
	All OAS members are encouraged to attend.	
	Visitors are welcome.	

12:00 p.m. - 1:30 p.m.	Academy Luncheon and Plenary Address	Heritage Room Webster Commons
	Admission by ticket only.	
	[May be purchased at check-in desk.]	

Clifford Houston
Associate VP Educational Outreach

University of Texas Medical Branch
The Journey of One Microbiologist...Still in Progress
GENERAL INFORMATION

Name Badges: Name badges, provided upon registration, must be worn at all times by all individuals attending Academy sectional programs, business meetings, and luncheon. If your badge is not visible, you may be asked to leave by the persons in charge. Lost badges may be replaced at the registration desk upon verification of your registration documents. **All presenters must register and wear an official name badge.**

Parking: All parking lots are open to visitors, unless otherwise specified.

On-site Registration Fees: Members - \$20.00
Non-members - \$25.00
Student members - \$10.00
Student non-members - \$15.00
Luncheon tickets (if available) - \$20.00

2008 and 2009 Dues are Payable: The OAS registration desk will accept dues payments.

Professional - \$30.00
Graduate/Undergraduate Student - \$20.00
Family - \$35.00
Library - \$40.00
Life - \$500.00

Guidelines for Paper Publication: Papers may be published in the *Proceedings of the Oklahoma Academy of Science*, subject to the editorial policies as stated in *POAS*, Volume 82 and review of the Editorial Board. OAS members are charged \$35 per page and non-members are charged \$105 per page.

Executive Secretary-Treasurer: Inquiries concerning upcoming OAS activities and membership may be directed to Dr. David Bass, OAS Executive Secretary-Treasurer, Campus Box 90, University of Central Oklahoma, Edmond OK 73034, 405-974-5772, dbass@uco.edu.

Official Meeting Hotel: The designated meeting hotel is the Holiday Express Hotel & Suites, located at 7840 NW 39th Expressway, Bethany OK 73008. Phone: (405) 787-6262, FAX: (405) 787-6263, Email: bethany.hie1@gmail.com, Web: www.hiexpress.com/bethany.

No Smoking: Please, no smoking in any of the buildings on the campus. Also, food and drink are not permitted in any meeting room. Thank you.

Refreshments: Food and drink will be available in room 100 of the Beaver Science Building during registration and breaks.

Assistance or Information: Look for individuals with OAS badges or host ribbons. These are faculty and staff assigned to assist you.

SPECIAL NOTES

Special thanks are extended to the **site coordinator Dr. Sharon Young**, Professor Emeritus of Biology at Southern Nazarene University, who coordinated all aspects of the meeting, including room arrangements, projectors, luncheon, and symposium.

Upcoming Meetings:

2009 Oklahoma Junior Academy of Science, East Central University, March 26-28

2009 Spring Field Meeting, Lake Eufaula State Nature Park, April 17-19

2009 Annual Technical Meeting, East Central University, November 6

SECTION A: BIOLOGICAL SCIENCES – BOTANY
Room 300

Moderator: Gloria Caddell
University of Central Oklahoma

- 8:30 **Variations on a Theme: The Plants of Cowen Creek.** Nathan Fite, Jennifer McAllister, University of Oklahoma.
- 8:45 ****Effects of Abiotic Factors and Cattle Grazing on Gypsum Outcrop Plant Communities in the Cimarron Gypsum Hills, Northwestern Oklahoma.** Kristi Rice, Gloria Caddell, University of Central Oklahoma.
- 9:00 ***Seasonal Pattern of Tannin Production in Post Oaks: Wet vs. Dry Years.** Sara N. Moore, Stanley A. Rice, Erica A. Corbett, Southeastern Oklahoma State University.
- 9:15 **Origin, Migration, and Diversification of ‘Mediterranean-Climate’ Species of *Senecio* (Asteraceae) in Central Chile: A Molecular Phylogenetic Approach.** Linda E. Watson, Pieter B. Pelsler, Oklahoma State University.
- 9:30 Break
- 9:45 **A Generalist Tymovirus of the Tallgrass Prairie Preserve.** Michael W. Palmer, Oklahoma State University.
- 10:00 **Distribution and Ecology of Diatoms in Ephemeral Granite Rock Pools.** J.T. Cooper, E.A. Bergey, Oklahoma Biological Survey, University of Oklahoma.
- 10:15 **Patterns of Evolution in *Paysonia* (Brassicaceae).** Andrew Doust, Oklahoma State University.
- 10:30 **Flora of Oklahoma Project.** Flora Oklahoma Editorial Committee.
- 11:00 **Section A Business Meeting,** Room 102 (Auditorium)
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

Poster

- *Polymorphism in Microsatellite Loci in *Impatiens capensis* (Balsaminaceae).** L. Meador, J.A. Steets, Oklahoma State University.

*Undergraduate Competition

**Graduate Competition

SECTION A: BIOLOGICAL SCIENCES – ZOOLOGY

Room 102

**Moderator: Michelle Haynie
University of Central Oklahoma**

- 8:30 ***Terrapene Morphometrics: Examining Interbreeding Within the Genus.**
Erin E. Miller, Kenneth D. Andrews, East Central University.
- 8:45 ***A Digenomic Phylogeny of the Genus *Myotis* Reveals Significant Convergent Evolution.** Craig E. Stanley, Jr., Justin B. Lack, Zachary P. Roehrs, Ronald A. Van den Bussche, Oklahoma State University.
- 9:00 ****Exploring the Faunal Connection between the Ozark Plateau and the Appalachian Mountains: A Phylogeographic Study of the Long-Tailed Salamanders of the *Eurycea longicauda* Complex.** E.K. Timpe, University of Tulsa.
- 9:15 ***Synthetic and Natural Feeding Attractants for Foraging Yellowjackets (Hymenoptera: Vespidae).** Stephen Knier, Tova Braun, Hal Reed, Oral Roberts University.
- 9:30 ***Helminths of *Rana catesbeiana* in Pottawatomie County, Central Oklahoma.** Michael L. Lackey, Kenneth D. Andrews, East Central University.
- 9:45 ***Comparative Endochondral Ossification of the Carapace and Plastron in Three Families of Testudines.** Elizabeth M. Hall, Kenneth D. Andrews, East Central University.
- 10:00 ***Testudine Variation of the Carapacial Vascular Interactions with the Scute Layer.** Chelsea S. Downs, Kenneth D. Andrews, East Central University.
- 10:15 **Motorless Myosin V: From *C. elegans* to Mammals.** K. Ingram, S.D. Fields, East Central University.
- 10:30 **Initial Sampling of Grasshopper Populations at One Location in Pontotoc County.** Siara Reich, East Central University.
- 10:45 ***Analysis of Quetzal Nesting Trees.** D. Linville, D. Hille, D.G. Siegfried, Southern Nazarene University.
- 11:00 **Section A Business Meeting,** Room 102 (Auditorium)
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

*Undergraduate Competition

**Graduate Competition

SECTION A: BIOLOGICAL SCIENCES – ZOOLOGY

(continued)

Poster

***Population Genetic Structure of the Cave Myotis, *Myotis velifer*, in Northwestern Oklahoma During Winter Months.** Kimberly L. Koppari, Tiffany L. Cloud, Sarah T. Smith, Wililam Caire, Ronald A. Van den Bussche, Gregory M. Wilson, University of Central Oklahoma, Oklahoma State University.

*Undergraduate Competition

SECTION B: GEOLOGY

**SECTION C: PHYSICAL SCIENCES
Room 109**

**Moderator: Weldon J. Wilson
University of Central Oklahoma**

- 9:45 **Science as Reverse Engineering with Implications for the Humanities.** Dominic Halsmer, Vyacheslav Tokarev, Timothy Bright, Cyrus Hanson, Oral Roberts University.
- 10:00 **Terrestrial Gamma Radiation Measurements and Weather.** Karen A. Williams, East Central University.
- 10:15 ***Flows in Horizontally Rotating Cylinders.** David L. Martin, University of Central Oklahoma.
- 10:30 **Cosmological Consequences of Gravitational Field Energy.** W. J. Wilson, University of Central Oklahoma.
- 11:00 **Section C Business Meeting,** Room 109
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

*Undergraduate Competition

SECTION D: SOCIAL SCIENCES

Room 408

**Moderator: Rodney Roosevelt
Cameron University**

- 9:45 **Using Reverse Engineering as a Model to Investigate the Human Condition.** Dominic Halsmer, Michael Gewecke, Rachelle Gewecke, Oral Roberts University.
- 10:00 **Exploring the Reliability of the Dogmatism Scale.** Rodney Roosevelt, Meagan Stewart, Mary Dzindolet, Cameron University.
- 10:15 **Self-Complexity of Actual, Ideal, and Ought Selves.** Matthew E. Stephenson, Alicia Limke, University of Central Oklahoma.
- 10:30 **A Model of Group Creativity.** Mary T. Dzindolet, Paul Paulus, Cameron University, University of Texas at Arlington.
- 11:00 **Section D Business Meeting,** Room 408
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

Posters

Rethinking Career Perceptions and Paths: A Review of and Recommendations for Career Management Research. Lacey Cline, Jennifer L. Kisamore, University of Oklahoma-Tulsa.

Testing the Generalizability of the Interpersonal Expectancy Scale and the Motivation to Avoid Negative Interpersonal Biases Scale. Jamie L. Gill, Amy E. Jobe, Robert D. Mather, University of Central Oklahoma.

Preferences and Visual Perceptions of Nature. D. West, B. Rayan, T. Stelter, J. Devenport, University of Central Oklahoma.

College Stress and Satisfaction with Life in a Sample of College Students. Lawrence Weinstein, Antonio Laverghetta, Cameron University.

**SECTION E: SCIENCE EDUCATION
Room 107**

**Moderators: Kurtis Koll and Michelle Smith
Cameron University**

- 9:00 **Field Trips: What is their Future?** E.A. Corbett, D. Wood, T. Patton, Southeastern Oklahoma University.
- 9:30 Break
- 9:45 **Evolution and Personal Religious Belief: Christian University Biology-Related Majors' Search for Reconciliation at a Christian University.** M. Winslow, Southern Nazarene University.
- 10:15 Break
- 11:00 **Section E Business Meeting**, Room 107
- 11:30 **Academy Business Meeting**, Room 102 (Auditorium)
- 12:00 **Academy Luncheon**, Heritage Room, Webster Commons

Posters

Fundamental Natural Laws of Physics, Chemistry, and Biology Discovered by Early Experimental Scientists such as Joule, Lavoisier, Pasteur, and Mendel Serve as a Foundation for Science Education. Suzanne Vincent, Oral Roberts University.

Teaching ^{13}C NMR in Organic I. Daniel M. McInnes, East Central University.

**SECTION F: GEOGRAPHY
Room 305**

**Section Chair: Greg Plumb
East Central University**

- 9:00 **Procedures for Maintaining the Oklahoma Department of Transportation Roads Geodatabase.** Melanie Morgan, East Central University.
- 9:15 **Capturing Geographic Information Interactively in a Web 2.0 World.** Jesse Turpin, East Central University.
- 9:30 Break
- 9:45 **Custom Tools for Editing a Parcel Database.** Bobby Ramsey, East Central University.
- 10:00 **“Back to the Future” with Sawyer Stereoscopy.** Gregory Plumb, East Central University.
- 11:00 **Sections F Business Meeting,** Room 305
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

**SECTION G: FISH AND WILDLIFE CONSERVATION
Room 010 (Basement)**

**Moderator: Kristen Baum
Oklahoma State University**

- 9:00 **Venomous Snakes of Oklahoma.** Richard D. Butler, McLoud High School.
- 9:15 ***A Herpetofaunal Survey of The Nature Conservancy's Boehler Seeps Preserve.** Jared Wood, Tim Patton, Jona Tucker, Southeastern Oklahoma State University, The Nature Conservancy.
- 9:30 Break
- 9:45 **Natural Disturbances and Impacts on Rare Species: When Do We Let Nature Take Its Course?** Tim Patton, Joseph McAllister, Jared Wood, Southeastern Oklahoma State University.
- 10:00 **Toxicity of a Glufosinate- and Several Glyphosate-Based Herbicides to Juvenile Amphibians from the Southern High Plains, USA.** Simon K. Dinehart, Loren M. Smith, Scott T. McMurry, Todd A. Anderson, Philip N. Smith, David A. Haukos, Oklahoma State University, Texas Tech University, U.S. Fish and Wildlife Service.
- 10:15 **Macroinvertebrate Diversity and Abundance Responses in Mixed-Grass Prairie Managed with Patch-Burn Techniques.** Elizabeth Doxon, Craig A. Davis, Samuel D. Fuhlendorf, Oklahoma State University.
- 10:30 **Ecology of Invasive Species and Disease Vectors in Urban Environments.** Kristen A. Baum, Oklahoma State University.
- 11:00 **Section G Business Meeting,** Room 010
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Hall, Webster Commons

*Undergraduate Competition

SECTION H: MICROBIOLOGY

Room 400

**Moderator: Charlie Biles
East Central University**

- 8:30 **Fungal Pathogens of Greenbriers (*Smilax* sp.): Beneficial Bioherbicides or Interesting Endophytes.** Charlie Biles, Mason Groves, Tyler Walker, East Central University.
- 8:45 **Initial Comparison of Grasshopper and Fungal Populations in Pasture vs. Tree-Shaded Areas.** Terry Cluck, C. Biles, East Central University.
- 9:00 **Initial Sampling of Fungal Populations at One Location in Pontotoc County.** Ajeena Joy, T. Cluck, C. Biles, East Central University.
- 9:15 ***Inhibition of *Chaetomium globosum* Growth and Reproduction Using Various Salts.** Marianni Fuego, Rachel Pattison, Charlie L. Biles, East Central University.
- 9:30 Break
- 9:45 ***Prevalence of *Escherichia coli* Before and After Rainfall in Big Twin, Oxbow, and Starvation Lakes in Northern Michigan.** Miriam Adamiec, John Korstad, Oral Roberts University.
- 10:00 ****Forensic Applications of Fatty Acid Analysis of *Bacillus cereus* T-Strain Using FAME.** TeeCie West, Christopher Ehrhardt, James Robertson, Oklahoma State University, FBI Academy.
- 10:15 ***Growth and Reproduction of *Chaetomium globosum* on Various Carbon Sources Exposed to Different Light Regimes.** Jennifer Young, Marianni Fuego, Rachel Pattison, Charlie L. Biles, East Central University.
- 10:30 ***A Comparison of Antibiotic Resistant *Escherichia coli* Between Sites of the Arkansas River and Wastewater Treatment Plant.** Moselle Starke, Joel Gaikwad, Caroline O'Farrell, Oral Roberts University.
- 10:45 ***Quantitative Analysis of the Upper Rio Savegre *Escherichia coli* Population.** S. Bivens, D.G. Siegfried, Southern Nazarene University.
- 11:00 **Sections H Business Meeting, Room 400**
- 11:30 **Academy Business Meeting, Room 102 (Auditorium)**
- 12:00 **Academy Luncheon, Heritage Room, Webster Commons**

*Undergraduate Competition

**Graduate Competition

SECTION I: ENGINEERING SCIENCES

Room 402

Moderator: Yuhao Jiang
University of Central Oklahoma

- 9:00 **Simulation of Laminar Flow in Micro-Junctions.** Tim Handy, Evan Lemley,
University of Central Oklahoma.
- 9:20 **Experimental Study of Laminar Flow in Junctions.** Jesse Haubrich, Willy Duffle,
Evan Lemley, University of Central Oklahoma.
- 9:40 **Role of Liquid Crystals in Non Display Applications.** Alaeddin Abu-Abed,
University of Central Oklahoma.
- 10:00 **Morphological Changes in Human Carotid Arteries with Age.** Jaehoon Seong,
University of Central Oklahoma.
- 10:20 **Integrating Affordances into Function Based Reverse Engineering.** Dominic
Halsmer, Nate Roman, Tyler Todd, Oral Roberts University.
- 10:40 **Methods for Quantitative Image Quality Evaluation of MRI Parallel
Reconstructions: Detection and Perceptual Difference Model.** Yuhao Jiang,
University of Central Oklahoma.
- 11:00 **Section I Business Meeting,** Room 402
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

SECTION J: BIOCHEMISTRY & BIOPHYSICS
Room 405A

Moderator: Blaine Mooers
University of Oklahoma Health Sciences Center

- 9:00 **Role of Residues in the Adenosine Binding Site of NAD of the *Ascaris suum* Malic Enzyme.** Deniz F. Aktas, Paul F. Cook, University of Oklahoma.
- 9:15 ****A Short Nur77-Derived Peptide Converts Bcl-2 from a Protector to a Killer – the Mechanism Supported by Liposome Based Biophysical Studies.** Feng He, Xuefei Tian, Siva Kumar Kolluri, Xiuwen Zhu, Xin Zhou, Bingzhen Lin, Ya Chen, Kai Sun, James Town, Xihua Cao, Feng Lin, Dayong Zhai, Shinichi Kitada, Frederick Luciano, Edmond O'Donnell, Yu Cao, John C. Reed, Arnold C. Satterthwait, Xiao-kun Zhang, Jialing Lin, University of Oklahoma Health Sciences Center, Burnham Institute for Medical Research, Oregon State University.
- 9:30 Break
- 9:45 **Expression of Codon-Optimized Hemagglutinin from Recently Isolated H3 Influenza Virus A/Oklahoma/309/06.** Tao Chen, Gillian Air, University of Oklahoma Health Sciences Center.
- 10:00 **Resolution of PLP to Make Apo O-acetylserine Sulfhydrylase and the Apo Enzyme's Reconstitution.** Rong Guan, Klaus D. Schnackerz, Paul F. Cook, University of Oklahoma.
- 10:15 **Effect of Mutations in Antigenic Site B in Hemagglutinin of Influenza Virus A/Oklahoma/309/2006.** Lyubov Popova, JingQi Feng, Gillian Air, University of Oklahoma Health Sciences Center.
- 10:30 **Structural Basis for Antagonism of Human Interleukin-18 by Poxvirus Interleukin-18 Binding Protein.** Brian Krumm, Xiangzhi Meng, Yongchao Li, Yan Xiang, Junpeng Deng, Oklahoma State University, University of Texas Health Science Center.
- 11:00 **Section J Business Meeting**, Room 405A
- 11:30 **Academy Business Meeting**, Room 102 (Auditorium)
- 12:00 **Academy Luncheon**, Heritage Room, Webster Commons

Poster

Crystal Structure of Prophenoloxidase from *Manduca sexta*. Yongchao Li, Oklahoma State University.

**Graduate Competition

**SECTION K: MICROSCOPY
Room 410**

**Moderator: Preston Larson
University of Oklahoma**

- 9:00 *Keynote Address: **The Role of Microscopy in Diagnosing Platelet Dysfunction Disorders.*** William Gunning, University of Toledo, College of Medicine Health Sciences, Toledo, Ohio.
- 10:15 Ugly Bug Contest Voting and Break
- 10:30 †**Optimizing Immunofluorescence Protocols for Proper Identification of Dorsal Root Ganglion Neuron Populations.** E. Matthew Hoffman, Kristin M. Edwards, Ruben Schechter, Kenneth E. Miller, Oklahoma State University Center for Health Sciences.
- 10:45 †**Submicron-Scale Mechanical Stress Detection using Scanning Surface Photo-Voltage Microscopy (SSPVM).** D. Dahanayaka, L. Bumm, L. Moszkowicz, P. Kaszuba, J. Slinkman, University of Oklahoma, IBM.
- 11:00 †**Characterization of Ferroelectric Random Access Memory Capacitors Using a Field-Emission Transmission Electron Microscope.** M. E. Curtis, G. D. Lian, K. R. Udayakumar, M. B. Johnson, University of Oklahoma, Texas Instruments.
- 11:15 **Towards a 3-D Nanobattery System: Individually-Wired Nano-Electrodes.** Paige L. Johnson, Dale C. Teeters, University of Tulsa.
- 11:30 **OMS Business Meeting**
- 12:00 **Ugly Bug Contest Voting and Lunch**

†OMS Timpano Competition

SECTION L: MATHEMATICS, COMPUTER SCIENCE, & STATISTICS

Room 201

**Moderator: Clay Carley
East Central University**

- 9:45 **Magic with C++ Templates.** Clay B. Carley III, East Central University.
- 10:00 **Hand Timing vs. Electronic Timing: Does It Really Make a Difference?** Anita M. Walker, East Central University.
- 10:15 **Web Sites: The Good, The Bad, and The Ugly.** Bill K. Walker, East Central University.
- 11:00 **Section L Business Meeting,** Room 201
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

**SECTION M: ENVIRONMENTAL SCIENCES & PLANNING
Room 304**

**Moderator: Charles Crittell
East Central University**

- 8:30 ***Van Atta Associates: An ASLA Award Winning Landscape Architecture Firm.**
Kyle Kremers, Oklahoma State University.
- 8:45 ***ASLA Award Winning Landscape Architecture Firm Marimo Radziner &
Associates.** Lexi Crothers, Oklahoma State University.
- 9:00 ***Ken Smith – A Modern Landscape Architect.** Cody Klein, Oklahoma State
University.
- 9:15 ***PDG: Tulsa Landscape Architect.** Marcia Prewitt, Oklahoma State University.
- 9:30 Break
- 9:45 ***George Hargreaves & Associates: Making a Statement in Landscape
Architecture.** Mitchell Cookson, Oklahoma State University.
- 10:00 ***Oehme Van Sweden & Associates: Use of Ornamental Grasses.** Tyler Journey,
Oklahoma State University.
- 10:15 **Stowe Garden: A Political Manifesto.** Charles Leider, Oklahoma State University.
- 10:30 **Impact of Wastewater Treatment Plant Effluent on Antibiotic Resistance in
Aeromonads.** Cindy R. Cisar, Northeastern State University.
- 11:00 **Section M Business Meeting, Room 304**
- 11:30 **Academy Business Meeting, Room 102 (Auditorium)**
- 12:00 **Academy Luncheon, Heritage Room, Webster Commons**

Poster:

***Comparison of WBGT Instrumentation with Other Means of Assessing
Environmental Conditions.** Rachel Frank, Oral Roberts University.

*Undergraduate Competition

SECTION N: BIOMEDICAL SCIENCES

Room 200

Moderator: Jennifer Xiao
Oklahoma Christian University

- 8:30 **The UL82 Gene Families in Cytomegaloviruses.** E.L. Blewett, Oklahoma State University Center for Health Sciences.
- 8:45 ***Exploration of Chemical MicroRNA Regulators in Cancer Lines.** Hunter Rhodes, P.E. Blower, J.S. Verducci, Oklahoma Christian University, Ohio State University.
- 9:00 **De-Epidermized Dermis Inhibits Invasion of Ras-Expressing Keratinocytes.** C.M. Andrews, M.B. Vaughan, University of Central Oklahoma.
- 9:15 **Fibroblast Differentiation in a New Wound Healing Model.** T.R. Palmer, M.B. Vaughan, University of Central Oklahoma.
- 9:30 Break
- 9:45 ***The Study of the Interaction between Th-POK and Corepressors.** J.R. West, Southern Nazarene University.
- 10:00 **Alpha Smooth Muscle Actin Expression Variation within Clonal Populations of Fibroblasts.** S.N. Chukwuma, M.B. Vaughan, University of Central Oklahoma.
- 10:15 ***Development of an ELISA (Enzyme-Linked Immune Sorbent Assay) to Measure Circulating TIMP-1 and MMP-9 in Human Sera.** Sara N. Moore, Joan T. Merrill, Stan Kamp, Southeastern Oklahoma State University, Oklahoma Medical Research Foundation.
- 10:30 ***Text Mining: Exploiting Natural Language Resources from MEDLINE.** C.B. Giles, Oklahoma Christian University.
- 10:45 ***Development of RNA Interference as an Experimental Protocol to Induce Endoplasmic Reticulum (ER) Stress in Cultured Neurons.** Randy B. Patterson, Oklahoma Christian University, Pepperdine University.
- 11:00 **Section N Business Meeting,** Room 200
- 11:30 **Academy Business Meeting,** Room 102 (Auditorium)
- 12:00 **Academy Luncheon,** Heritage Room, Webster Commons

*Undergraduate Competition

SECTION N: BIOMEDICAL SCIENCES

(continued)

Posters

The Effect of Percent Body Fat on Resting Heart Rate in Humans.

Ralph J. Douglas IV, Oral Roberts University.

***Identifying Protein Interactions Important in Sister Chromatid Cohesion.**

Kimberly Koppari, F.Wu, S. Rankin, Oklahoma Medical Research Foundation.

*Undergraduate Competition

Clifford W. Houston
Luncheon Speaker

Clifford W. Houston is the Herman Barnett Distinguished Professor in the Department of Microbiology and Immunology of the University of Texas Medical Branch (UTMB) in Galveston, Texas and serves the University as Vice President for Educational Outreach. Most recently he has headed, as President, the oldest single life science membership organization, the American Society for Microbiology. It is currently the largest such organization with over 43,000 members. He serves on the Board of Governors of the American Academy of Microbiology, to which he was elected in 1997, and has played a significant role in the education efforts of the Academy and the Society, especially in encouraging young talents to become scientists. While at UTMB, Dr. Houston also served as Deputy Associate Administrator for Education in the Office of Education at NASA. He is a major participant in the Education and Public Outreach Program of NASA's National Space Biomedical Research Institute. He is a past recipient of the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. He chaired the Annual Biomedical Research Conference for Minority Students (ABRCMS) Steering & Planning Committee. His research has concentrated on virulence mechanisms of human pathogenic bacteria with particular emphasis on the toxins that they produce. Targeted organisms include group A streptococci, *Salmonella*, and, most recently, *Aeromonas hydrophila*. He was named to the National Advisory General Medical Sciences Council of the National Institutes of Health in 2007. A native of Oklahoma, he obtained his B.S. and M.S. degrees from Oklahoma State University and a Ph.D. from the Oklahoma University Health Sciences Center. He did postdoctoral work as James W. McLaughlin Fellow at UTMB before joining its faculty.

Richard A. Dixon
Oklahoma Scientist of the Year

Richard A. Dixon has been named Oklahoma Scientist of the Year for his pioneering work in plant metabolism and his leadership of the Plant Biology Division of the Samuel Roberts Noble Foundation of Ardmore Oklahoma. Dr. Dixon and his research team have given scientists an excellent understanding of the complexity of phenylpropanoid compounds (flavonoids, isoflavonoids and lignin) and how plants make them. This basic research, using genomics, molecular biology, genetics and enzymology, leads to metabolic engineering which may improve the agronomic value of crops and produce compounds for industrial and medicinal uses. At the same time, Dr. Dixon, as Director of the Plant Biology Division and Senior Vice President of the Foundation, has led the Division and the Foundation's laboratories to international prominence. The Division has become the top choice as a place to work for young scientists. Dr. Dixon is Oklahoma's only member of the National Academy of Sciences, elected in 2007. A native of England, he obtained his scientific education at the University of Oxford and came to the Noble Foundation in 1988 from a position at the University of London. The Oklahoma Academy of Science is Oklahoma's association of scientists and is devoted to furthering understanding and appreciation of science in the state. The Oklahoma Scientist of the Year Award is given sporadically to honor outstanding achievement of Oklahoma scientists. He will receive the honor

at the Annual Technical Meeting of the Academy at Southern Nazarene University on 31 October, 2008.

OKLAHOMA ACADEMY OF SCIENCE PRESIDENTS

1910	H. L. Lane, OU		
1911	D. W. Othern, Oklahoma City		
1912	S. W. Reaves, OU		
1913	C. W. Shannon, OU	1955	R. E. Olson, OU
1914	No meeting	1956	A. M. Stebler, OAMC
1915	C. W. Shannon, OU	1957	D. E. Howell, OAMC
1916	C. N. Gould, OU	1958	G. J. Goodman, OU
1917	L. C. Raiford, ISU	1959	E. Lucas, OU
1918	No meeting	1960	P. E. Smith, OUMS
1919	No meeting	1961	E. M. Hodnett, OSU
1920	M. M. Wickham, Norman	1962	H. G. Barclay, TU
1921	A. F. Reiter, PU	1963	G. A. Moore, OSU
1922	J. B. Thoburn, Oklahoma City	1964	A. D. Buck, NOJC
1923	R. O. Whitenton, OAMC	1965	J. E. Webster, OSU
1924	S. Weidman, OU	1966	C. R. Williams, PU
1925	(spring) C. E. Sanborn	1967	C. D. Riggs, OU
1925	(fall) H. L. Dodge, OU	1968	E. A. Reynolds, SWSC
1926	J. H. Could, OAMC	1969	L. V. Scott, OUHSC
1927	C. N. Gould, OU	1970	C. C. Carpenter, OU
1928	O. M. Smith, OAMC	1971	P. Buck, TU
1929	A. Richards, OU	1972	W. A. Carter, ECSU
1930	L. Long, Ok. City	1973	C. J. Mankin, OU
1931	A. O. Weese, OU	1974	N. N. Durham, OSU
1932	H. Patterson, OAMC	1975	B. Shirley, TU
1933	J. E. Knowles, PU	1976	G. W. Todd, OSU
1934	F. G. Brooks, OCU	1977	D. E. Kizer, Noble Foundation
1935	C. E. Decker, OU	1978	G. Odell, OSU
1936	H. J. Harper, OAMC	1979	R. Couch, ORU
1937	B. D. Barclay, TU	1980	G. Wolgamott, SWSU
1938	C. M. Perry, OU	1981	E. Rice, OU
1939	H. D. Chase, TU	1982	E. Grigsby, NSU
1940	G. L. Cross, OU	1983	J. Sokatch, OUHSC
1941	R. W. Jones, OAMC	1984	M. Whitmore, OU
1942	H. I. Featherly, OAMC	1985	J. Black, OBU
1943	O. F. Evans, OU	1986	J. Wilhm, OSU
1944	V. G. Heller, OAMC	1987	M. K. Patterson, Noble Foundation
1945	J. R. Nielsen, OU		
1946	O. C. Dermer, OAMC	1988	M. P. Carpenter, OU
1947	J. T. Self, OU	1989-1990	K. E. Conway, OSU
1948	L. S. McLeod, TU	1991-1992	J. K. McPherson, OSU
1949	J. C. Shirley, PU	1993	J. R. Estes, OU
1950	H. Taylor, OCW	1994-1995	J. D. Tyler, CU
1951	H. W. Larsh, OU	1996-1997	C. Taylor, SEOSU
1952	V. B. Monnett, OAMC	1998-1999	R. J. Tyrl, OSU
1953	S. P. Massie, LU	2000-2001	D. Bass, UCO
1954	A. N. Murray, TU	2002-2003	C. Clifford, NSU
		2004-2005	S. Young, SNU

2006-2007 S. Barber, OCU
2008-2009 U. Melcher, OSU