

STUDENT PRESENTATION AWARDS AT THE 2009 COLLEGIATE MEETINGS

EASTERN REGION

LINCOLN MEMORIAL UNIVERSITY

HARROGATE, TENNESSEE

4 APRIL 2009

ORAL PRESENTATIONS

Botany

- First Place—*Katharine Michelle Sloop*. Effects of a Late Freeze and Prolonged Drought on an East Tennessee Hardwood Forest. *University of Tennessee at Knoxville, Knoxville, Tennessee*
- Second Place—*Amanda Edwards*. A Study of 15 *Asarum canadense* L. across the Flowering Season in Anderson County, Tennessee. *Maryville College, Maryville, Tennessee*

Health Science

- First Place—*Hannah Debusk*. An Investigation into the Effects of Dieting on Mobility of Dogs and Cats. *Lincoln Memorial University, Harrogate, Tennessee*

Math and Science Teachin

- First Place—*Eugenie de Silva*. Teaching Physics and Chemistry through Software Programs. *Missouri University, Columbia, Missouri*

Medical Science

- First Place—*Justin Patel*. An Investigation into Osteopathic Manipulation Treatment for Carpal Tunnel Syndrome. *Lincoln Memorial University, Harrogate, Tennessee*

Physics and Astronomy

- First Place—*Jackie Martindale*. The Science of Sine Waves and Harmony in Music. *Lincoln Memorial University, Harrogate, Tennessee*
- Second Place—*Chris Stotts*. Frequency Constancy Relationships over Medium Change. *Lincoln Memorial University, Harrogate, Tennessee*
- Third Place—*Tessa Garrett*. An Investigation into the Correlation Between Lameness and Torque Applied to the Right Fore-Limb of the Heading Horse. *Lincoln Memorial University, Harrogate, Tennessee*

Zoology

- First Place—*Scott Gillespie*. An Inventory of Reptiles in Sumner County, Tennessee. *Maryville College, Maryville, Tennessee*

MIDDLE REGION

TENNESSEE STATE UNIVERSITY

NASHVILLE, TENNESSEE

18 APRIL 2009

ORAL PRESENTATIONS

Biology: Animal and Cellular Behavior

- First Place—*Lauren Oeser*. Specificity of Anti-Predator Behavior in Streamside Salamander Larvae. *Belmont University, Nashville, Tennessee*
- Second Place—*Adit Dhummakupt*. Information Cascades in a Protozoan Population. *Vanderbilt University, Nashville, Tennessee*
- Third Place—*M. Christina Inman*. Investigating a Possible Connection Between Pathogen Avoidance and Reproductive Output of *Caenorhabditis elegans*. *Belmont University, Nashville, Tennessee*

Biology: Neuroscience

- First Place—*Robert Gibson*. The Effects of 6-Hydroxydopamine, Sulpiride and Sch-23390 on Locomotion in *Caenorhabditis elegans*. *Belmont University, Nashville, Tennessee*
- Second Place—*Brittany L. Myers*. Blocking the Effects of 6-OHda in *Caenorhabditis elegans*. *Belmont University, Nashville, Tennessee*
- Third Place—*Warren Dean V.* Modulation of L-Amino Aromatic Decarboxylase Expression in the Striatum of Mptp-Pd Mouse Model. *Tennessee State University, Nashville, Tennessee*

Cancer Biology

- First Place—*Dylan R. Addis*. Small Collagen Peptides Modulate Angiogenesis. *Lipscomb University, Nashville, Tennessee*
- Second Place—*Olukemi Gbemisola Jolayemi*. Optimization of Dimethanol Sulfoximide in Preserving Human Cancer Cell. *Tennessee State University, Nashville, Tennessee*
- Third Place—*Olena McDowell*. Anti-Cancer Compounds Extracted from Phytochemical. *Tennessee State University, Nashville, Tennessee*

Chemistry

- First Place—*Jennifer L. Greene*. Diffusion and Partitioning of Organic Compounds in to Polydimethylsiloxane (PDMS). *Vanderbilt University, Nashville, Tennessee*

Second Place—*Elizabeth S. Muffly*. Structural Studies of  $o^6$ -Benzyldeoxyguanosine Adduct Paired Opposite Synthetic Base in Dickerson Drew Dodecamer Duplex (ddd). *Vanderbilt University, Nashville, Tennessee*

Third Place—*Million T. Mesfin*. Theoretical Investigation of Interstellar Phosphaethyne. *Tennessee State University, Nashville, Tennessee*

#### Engineering, Math, and Computer Science

First Place—*Liwei Jiang*. Engineering a Perfusion-Enabled Rotocompressor to Allow the Addition of Nutrients, Chemoattractants, and Drugs. *Vanderbilt University, Nashville, Tennessee*

Second Place—*Yuliya Melnikova*. Green's Function-Based Approach to Non-Linear Boundary Value Problems. *Middle Tennessee State University, Murfreesboro, Tennessee*

Third Place—*Ato Wallace*. Economic Impact of Interventions Applied to Epidemiological Biosurveillance Problems. *Fisk University, Nashville, Tennessee*

#### Entomology

First Place—*Justin D. Glenn*. Structural and Functional Characterization of the Mosquito Dorsal Vessel. *Vanderbilt University, Nashville, Tennessee*

Second Place—*Andrew E. Wicke*. Macroinvertebrate Diversity and Water Quality at a Trout Hatchery Stream Entering the Obey River, Clay County, Tennessee. *Belmont University, Nashville, Tennessee*

Third Place—*William Baugher*. Aquatic Macro Invertebrates and the Distribution of *Ambystoma barbouri* in Central Tennessee. *Belmont University, Nashville, Tennessee*

#### Immunology and Microbiology

First Place—*Mollie A. Schlarman*. Presence of Pbp2a Protein in Methicillin-Resistant *Staphylococcus aureus* Isolates Containing the Mec-a Gene. *Belmont University, Nashville, Tennessee*

Second Place—*Alaia L. Williams*. Incidence of Methicillin-Resistant *Staphylococcus aureus* in Belmont University Dormitories. *Belmont University, Nashville, Tennessee*

Third Place—*Esther Caroline Kibakaya*. Flame Retardant Tetrabromobisphenol-a Interferes with the Immune Function of Human Natural Killer Cells. *Tennessee State University, Nashville, Tennessee*

#### Zoology/Geology

First Place—*Nigel Luther*. Potential Evolutionary Patterns of Pennsylvanian Age *Amphisstites centronotus* (Ulrich And Bassler 1906) from the Mid-Continent of North America. *Tennessee Technological University, Cookeville, Tennessee*

Second Place—*Alaina Reagan*. A Phylogeny for the Salamander Family *Ambystomatidae* Based on a

Nuclear Marker. *Belmont University, Nashville, Tennessee*

Third Place—*Audrey S. Henson*. Resolving Conflicts in Ambystomatid Salamander Phylogeny with Nuclear DNA. *Belmont University, Nashville, Tennessee*

## WESTERN REGION

### RHODES COLLEGE

### MEMPHIS, TENNESSEE

4 APRIL 2009

## ORAL PRESENTATIONS

### Session 1

First Place—*Erica C. McMorise*. Evaluation of *In Vitro* Vasoactive Properties of Newly Discovered BK Channel Activators. *Christian Brothers University, Memphis, Tennessee*

Second Place—*Amanda S. Hoeffken*. Obesity among Childhood Hodgkin Lymphoma Survivors. *Rhodes College, Memphis, Tennessee*

Third Place—*Benjamin Jackson*. Over-expression of CKAP2 Reduces Colony Formation in Hela Cells. *Freed-Hardeman University, Henderson, Tennessee*

### Session 2

First Place—*Stephanie N. Cassell*. Assessing Amphibian Marking Techniques in Recent Toad Metamorphs: Reliability, Effects on Survivorship and Physiology, and Conservation Implications. *Rhodes College, Memphis, Tennessee*

Second Place—*Emily Wong*. Carbohydrate Distribution in Bamboo. *Christian Brothers University, Memphis, Tennessee*

Third Place—*Blake A. Jackson*. Comparison of Flight Patterns and Habitat Preferences among the *AE. vexans*, *CX. erraticus*, and *AN. smaragdinus* Mosquito Populations. *Christian Brothers University, Memphis, Tennessee*

### Session 3

First Place—*Stephanie Johnson*. Chromatic Discrimination Measured with mfVEPS. *Christian Brothers University, Memphis, Tennessee*

Second Place—*Laura R. Johnson* and *Chassidy Groover*. GDP-mannose Transporters in the Filamentous Fungus *Aspergillus nidulans*. *Rhodes College, Memphis, Tennessee*

Third Place—*Michelle Paul*. Identification of Synergistic Antimalarial Therapeutics from a Collection of Bioactive Compounds. *Christian Brothers University, Memphis, Tennessee*

**POSTER PRESENTATIONS**

## Poster Session

First Place—*Marian G. Moore*. Temperature and Osmotic Stress Effects on Amphibian Sperm Function. *Memphis Zoological Society, Memphis, Tennessee*

Second Place—*Lauren Lambeth*. Changes in Soil Characteristics by English Ivy (*Hedera helix*) in Overton Park. *Rhodes College, Memphis, Tennessee*

Third Place—*Marcus Harris*. Potentiometric Titrations of Malic and Citramalic Acids with Aluminum in Aqueous Solutions. *LeMoyne-Owen College, Memphis, Tennessee*

**Recipients of the Tennessee Academy of Science Distinguished Secondary School Science Teacher Award**

- 1997—Alan Redmond, John Sevier Middle School, Kingsport  
1998—Linda Phelps, Camden Central High School, Camden  
1999—Jane Whitaker, Lenoir City High School, Lenoir City  
2000—Pat Carpenter, McDonald School, Mohawk  
2001—Gary Barrigar, Elizabethton High School, Elizabethton  
2002—Kathryn Gemmer, University School, Johnson City  
2003—Constance Brown, McEwen High School, McEwen  
2004—Jan Coley, Jefferson County High School, Dandridge  
2005—Marion Pitts, Westview High School, Martin  
2006—Jennifer Dye, Pope John Paul II High School, Hendersonville  
2007—Ronnie L. Nixon, Greenbrier High School, Greenbrier  
2008—Sarah Elizabeth Millsap, Blackman High School, Murfreesboro