

## STUDENT PRESENTATION AWARDS AT THE 2010 COLLEGIATE MEETINGS

## EASTERN REGION

WALTERS STATE COMMUNITY COLLEGE  
MORRISTOWN, TENNESSEE  
24 APRIL 2010

## ORAL PRESENTATIONS

## Computer Science

First Place—*Eugenie de Silva*. COMSOL vs. Microsoft Excel. *Missouri University, Columbia, Missouri*

## Environmental Science

First Place—*Beth Mattie*. The Effects of Fecal Contamination on a Stream that Drains into the Clinch River Basin. *Lincoln Memorial University, Harrogate, Tennessee*

## Health Science

First Place—*Shelby Kirkpatrick*. Antibiotic Resistance Analysis as a Method for Tracking Fecal Contamination in Norris Reservoir, Tennessee. *Lincoln Memorial University, Harrogate, Tennessee*

## 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—*Samantha Christian*. The Bat Speed Required for a Homerun. *Lincoln Memorial University, Harrogate, Tennessee*

## POSTER PRESENTATIONS

## Analytical Chemistry

First Place—*Rebecca Smith*. Determining the Index of Refraction of a Liquid with an Abbe Refractometer. *Walters State Community College, Morristown, Tennessee*

Second Place—*Brittany Wiley*. Using Solid Phase Extraction to Remove Caffeine from Mountain Dew. *Walters State Community College, Morristown, Tennessee*

## Engineering

First Place—*Paul Blair*. Demonstration of Large Scale Fractional Distillation. *Walters State Community College, Morristown, Tennessee*

Second Place—*Christopher Gonzales*. Demonstration of Continuous Process for Liquid-Liquid Extraction. *Walters State Community College, Morristown, Tennessee*

## Laboratory Techniques

First Place—*Jenni Flanigan*. Radial Chromatography. *Walters State Community College, Morristown, Tennessee*

Second Place—*Brianna Ellis*. Demonstration of the Abbe Refractometer. *Walters State Community College, Morristown, Tennessee*

## Organic Synthesis

First Place—*Nikita Hnatk*. Bananas for Isoamyl Acetate. *Walters State Community College, Morristown, Tennessee*

Second Place—*Benjamin H. Morgan*. Catalytic Hydrogenation of Maleic Anhydride with a Parr Shaker. *Walters State Community College, Morristown, Tennessee*

Third Place—*Adam Mullins*. Demonstration of Le Chatelier's Principle using a Soxhlet Extractor. *Walters State Community College, Morristown, Tennessee*

## MIDDLE REGION

BELMONT UNIVERSITY  
NASHVILLE, TENNESSEE  
17 APRIL 2010

## ORAL PRESENTATIONS

## Biology I

First Place—*Bao Nguyen, Ayeeshik Kole, Kevin T. Seale, Lori McGrew, John P. Wikswo, John A. McLean, Jeffrey R. Enders, Todd R. Graham, P. Anthony Weil, and Tessa Sebastian*. Monitoring of Real-Time Cell Cycle of *Saccharomyces cerevisiae* in Microfluidic Device. *Vanderbilt University, Nashville, Tennessee, and Belmont University, Nashville, Tennessee*

Second Place—*Felicia Udoji\** and *Margaret Whalen*. Analysis of the Effects of Dichloro-Diphenyl-Trichloroethane (DDT) on Natural Killer Cells. *Tennessee State University, Nashville, Tennessee*

Third Place—*Jessica L. Miles\**, *Robin C. Bairley, Margaret H. Platts, and Katherine L. Friedman*. Analysis of Telomerase Processivity in Yeast EST2 Long-Telomere Mutants. *Vanderbilt University, Nashville, Tennessee*

## Biology II

First Place—*Zackary L. Powers\** and *Karen Meisch*. The Analysis of Phenotypic Malformities in *Danio rerio* When Exposed to Di-2-Ethylhexyl Phthalate (DEHP) During Early Stages of Development. *Austin Peay State University, Clarksville, Tennessee*

Second Place—*Abby Murphy\** and *Lori L. McGrew*. Chronic Nicotine Exposure from the Embryo to Juvenile Stage in *Danio rerio* and Its Impact on Working Memory. *Belmont University, Nashville, Tennessee*

Third Place—*Kendra Cowan\** and *John Niedzwiecki*. Effect of Acute Ethanol Exposure on the Working Memory and Learning of Adult Zebrafish. *Belmont University, Nashville, Tennessee*

## Chemistry

First Place—*Eunice Ng\** and *Mohammad Al-Masum*. PD-Catalyzed Microwave Irradiated Cross-Coupling Reactions for Chalcone Synthesis. *Tennessee State University, Nashville, Tennessee*

Second Place—*Robin M. Crowell\**, *Autumn Marshall*, and *Kent Clinger*. The Determination of the Antioxidant Capacity in Herbal Teas using Three Methods. *Lipscomb University, Nashville, Tennessee*

Third Place—*Jarvis J. Callicutt\**, *William Y. Boadi*, and *Cosmas O. Okoro*. Synthesis and Antioxidant Activity of 3-(Trifluoromethyl)-3,4-Dihydroacridin-1(2H)-One. *Tennessee State University, Nashville, Tennessee*

## Ecology

First Place—*Sara Bentley\** and *John Niedzwiecki*. The Specificity of the Anti-Predation Response of *Ambystoma barbouri*. *Belmont University, Nashville, Tennessee*

Second Place—*Ryan S. Alexander\** and *C. Steven Murphree*. Establishing Criteria to Characterize the Habitat of *Triatoma sanguisuga* in Sylvatic Areas of Middle Tennessee. *Belmont University, Nashville, Tennessee*

Third Place—*Robert Baert\** and *Peter Li*. Potential Sites for Wind Power. *Tennessee Technological University, Cookeville, Tennessee*

## Physics, Math, and Computer Science

First Place—*Zachary D. Hodge\**, *Jesse Hotchkin\**, and *John P. Salter\**. Domain Decomposition Methods for Solving Elliptic Equations. *Austin Peay State University, Clarksville, Tennessee*

Second Place—*Sarah-Ann M. Claiborne\** and *Stephen J. Robinson*. Surface Plasmon Resonance. *Belmont University, Nashville, Tennessee*

Third Place—*Robert D. French\**, *Casey L. McKnight\**, and *Amber O'Connell\**. On Some Geometrical Aspects of the Finite Element Method. *Austin Peay State University, Clarksville, Tennessee*

## WESTERN REGION

CHRISTIAN BROTHERS UNIVERSITY

MEMPHIS, TENNESSEE

10 APRIL 2010

## ORAL PRESENTATIONS

## Behavior

First Place—*Stephanie N. Cassel*. Stop and Smell the Roses: How Olfactory Enrichment Affects the Behavior of Captive Jaguars (*Panthera onca*) at the Memphis Zoo. *Rhodes College, Memphis, Tennessee*

Second Place—*Kristi A. Prevost*. Identifying and Evaluating Social, Dominant, and Aggressive Behaviors among Three Bottlenose Dolphins in Key Largo, Florida. *Christian Brothers University, Memphis, Tennessee*

Third Place—*Wallace Coy Lock*. Atlantooccipital Dissociation: A Uniformly Fatal Injury? *Christian Brothers University, Memphis, Tennessee*

## Chemistry and Biochemistry

First Place—*Xiong B. Lin*. *Dermacentor variabilis*: The Alteration of the Wound Healing Mechanism. *Christian Brothers University, Memphis, Tennessee*

Second Place—*Supriya Ponnappa*. Effect of High-Cholesterol Diet on Cholesterol Levels in Arterial Smooth Muscle. *Christian Brothers University, Memphis, Tennessee*

Third Place—*Daniel Eastlack*. A Novel, NIRS Based Approach to Chytrid (*Batrachochytrium dendrobatidis*) Detection in the Toad *Anaxyrus fowleri*. *Rhodes College, Memphis, Tennessee*

## Engineering

First Place—*Binh Nguyen* and *Russel Saliendra*. Wireless Charging Station for Low-Powered Electronic Devices. *Christian Brothers University, Memphis, Tennessee*

Second Place—*Patrick Louie*. Blind Spot and Rear End Detection System for Vehicles. *Christian Brothers University, Memphis, Tennessee*

Third Place—*Harshit R. Shroff*, *Anthony Bownes*, and *James Brown*. Use of Green Energy in Autonomous Vehicles. *Christian Brothers University, Memphis, Tennessee*

## Molecular and Cellular Biology

First Place—*Terence Netzel*. Polycystic Kidney Disease-1 Protein Expression in Murine Chochlea using EGFP Reporter. *Christian Brothers University, Memphis, Tennessee*

Second Place—*Caitlin Ashley*. Comparing the Amplification of White Spot Syndrome Virus Genes with Different Primers. *Christian Brothers University, Memphis, Tennessee*

Third Place—*Jessica Hines*. Dose Dependent Regulation of Transgene Expression *In Vivo*. *Christian Brothers University, Memphis, Tennessee*

#### POSTER PRESENTATIONS

First Place—*Allison W. Graham*. Development of Non-Invasive Reproductive Monitoring Techniques for Endangered Snow Leopards and Amur Leopards. *Rhodes College, Memphis, Tennessee*

Second Place—*Elizabeth Calabretta*. Assembly of Copper and Palladium Supramolecules Using Two Different Bifunctional Ligands. *Christian Brothers University, Memphis, Tennessee*

Third Place—*Jeremey Branch*. Iron Glycine Hydroxo Complexes in Aqueous Solutions. *LeMoyne-Owen College, Memphis, Tennessee*

\*Student presenter