

# **Tennessee Academy of Sciences**

**Western Tennessee Collegiate Meeting**

**March 24, 2001**

**UNIVERSITY OF MEMPHIS**



# TAS

## Tennessee Academy of Sciences

### Section 1: Ellington Auditorium

**Moderator: Dr. Melvin Beck**  
Professor  
Biology Department  
University of Memphis

- 10:15 **Morphological Investigation of Neurospheres**  
Rachel Rome<sup>1</sup>, Eric Laywell<sup>2</sup>, Dennis Steindler<sup>2</sup>, & Malinda Fitzgerald<sup>1,2</sup>  
<sup>1</sup>Department of Biology, Christian Brothers University; <sup>2</sup>Department of Anatomy and Neurobiology, University of Tennessee, Memphis, TN 38163.
- 10:30 **Mineral Deficiency Symptoms in *Brassica rapa***  
Matthew Keogh and Charles Stinemetz, Department of Biology, Rhodes College, 2000 North Parkway, Memphis TN 38112.
- 10:45 **Temporal Changes in the Spatial Distribution of *Rubus*, *Lonicera*, and *Solidago*.**  
Matthew H. Watson, Dept. of Biology, The University of Memphis, Memphis, TN 38152.
- 11:00 **Possible Autonomic Nervous System Dysfunction in Post-abdominal Surgeries**  
A.M. Cox<sup>1</sup> and H. Rashed<sup>2</sup>, <sup>1</sup>Dept. of Biology, Christian Brothers Univ., Memphis, TN 38104; <sup>2</sup>Dept. of Autonomic Function, University of Tennessee, Memphis, TN 38163.
- 11:15 **Xenotransplantation of Porcine Islets into SCID Mice**  
Cina Ali, Dept. of Biology, Christian Brothers University, Memphis, TN 38104; Dr. Ivan Gerling, Dept. of Endocrinology, University of Tennessee, Memphis, TN 38163.
- 11:30 **A Comparison of Biological and Chronological Age in the Morbidly Obese: Obesity as an Accelerated State of Aging.**  
Laura Williamson, Department of Biology, Christian Brothers University, Memphis, TN 38104 and Cynthia K. Buffington, Ph.D., Dept. of Biochemistry, University of Tennessee, Memphis, TN 38163.
- 11:45 **Applying Medical Anthropology to Understand Perceived Efficiency of Medial Treatment in Different Cultures.**  
Christopher Laurent, Department of Biology and Teri Mason, Department of Behavioral Sciences, Christian Brothers University, Memphis, TN 38104.

12:00 **Ethnomedicinal Studies in Alternative Therapies**

Manika Sharma, Department of Biology, University of Tennessee, Martin, TN 38238.

12:15 **Glycogen Concentrations in Freshwater Mussels.**

Seth Jones, Ross Cascio, and David Kesler. Rhodes College, 2000 North Parkway, Memphis, TN 38112.

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Section 2: Ellington Hall, Room 131

**Moderator: Dr. Barbara Taller**  
Associate Professor  
Microbiology and Molecular Cell Sciences  
University of Memphis

- 10:15 **Atypical Protein Kinase C Inhibition Is Required for Phospholipase D Activation in Rat-1 Fibroblasts Expressing  $\alpha_{1A}$  Adrenergic Receptors**  
Gautam K. Gandhi<sup>1</sup>, Jean-Hugues Parmentier<sup>2</sup>, and Kafait U. Malik<sup>2</sup>, Department of Biology, Christian Brothers University, Memphis, TN 38104<sup>1</sup> and Department of Pharmacology, University of Tennessee, Memphis, TN 38163<sup>2</sup>,
- 10:30 **Expression of Specific Cytokines in Response to Infection of *Plasmodium berghei***  
Arrington D<sup>1</sup>, van der Heyde HC<sup>2</sup>, Brown T<sup>2</sup>  
<sup>1</sup>Department of Biology, Christian Brothers University, Memphis, TN 38104;  
<sup>2</sup> Departments of Microbiology and Immunology, Louisiana State University Health Sciences Center, Shreveport, LA 71130.
- 10:45 **The Role Of GABA In Synaptogenesis Between Horizontal Cells And Photoreceptor Cells In The Mammalian Retina**  
Lewis Pearson\*, D.A. Johnson#, and M.E.C. Fitzgerald\*, Dept. of Biology, Christian Brothers Univ., Memphis, TN 38104\*; and Dept. of Ophthalmology, University of Tennessee, Memphis, Memphis, TN 38163#.
- 11:00 **Premotor Anatomy of Orbicularis Oculi Motoneurons in Rats**  
Melissa L. Greene, Department of Biology, Christian Brothers University, Memphis, TN 38104; Mark S. LeDoux, MD, Ph.D., Department of Anatomy and Neurobiology, University of Tennessee, Memphis, TN 38163.
- 11:15 **An Investigation of the Major Urinary Proteins (MUP) of *Microtus ochrogaster***  
Candice L. Johnson, Charles J. Biggers, and Melvin L. Beck. Dept. of Biology, The University of Memphis, Memphis, TN 38152
- 11:30 **Isolation of *Aspergillus nidulans* Mutants Showing Hypersensitivity to Calcofluor White**  
Terry W. Hill<sup>1</sup>, Darlene M. Loprete<sup>2</sup>, Mridula Bagrodia<sup>2</sup>, Jennifer A. Livesay<sup>1</sup>, Amit Mirchandani<sup>1</sup>, and Michelle Momany<sup>3</sup>. <sup>1</sup>Departments of Biology and

<sup>2</sup>Chemistry, Rhodes College, 2000 N. Parkway, Memphis, TN 38112, and

<sup>3</sup>Department of Botany, University of Georgia, Athens, GA.

11:45 **Characterization of Ultra-High Molecular Weight Polyethylene for Joint Prostheses**

Ben Evans, Ann Viano, Physics Department, Rhodes College, Memphis, TN 38112; and Sanjay Mishra, The University of Memphis, Memphis, TN 38152.

12:00 **Angiotensin II–Induced Transactivation of Epidermal Growth Factor Receptor and Hypertrophy is Mediated by Calcium/Calmodulin Kinase II in Rabbit Vascular Smooth Muscle Cells**

Binh Nguyen, Christian Brothers University, Memphis, TN 38104, Dr. Muthalif, and Dr. Malik, Department of Pharmacology, University of Tennessee, Memphis, TN 38163.

12:15 **Characterization of Nucleoside and DNA Adducts Formed By S-(1-Acetoxyethyl)glutathione and Implications for Dihalomethane-glutathione Conjugates**

Brent J. Morris, Glenn A. Marsch, and F. Peter Guengerich, Chemistry Department, Union University, Jackson, TN.