

## PRESIDENT OF THE TENNESSEE ACADEMY OF SCIENCE FOR 2009

I am pleased and honored to serve as the 2009 President of the Tennessee Academy of Science. In keeping with tradition, I will use this forum to introduce myself with a summary of my academic career and to highlight my views on the Academy's importance to science in Tennessee.

A Tennessee native, I grew-up in the small town of Lynchburg, best known around the world as the home of Jack Daniel's Distillery. While children today would disagree, I believe spending my formative years in a small rural community offered many advantages, a central element being time. This included time to explore the surrounding streams and forests and to sit quietly and observe nature at work; time for reading and exploration through books from the local library; and, finally, time to investigate how a myriad of mechanical devices worked and to experiment with possible approaches to their repair using only the resources at hand. Combined with my inquisitive nature, the time to observe the natural world around me and to develop problem-solving skills provided the foundation for my interest in science.

Enrollment at Middle Tennessee State University (MTSU) provided the opportunity to combine my interest in biology with the desire to investigate how systems worked. While I enjoyed my undergraduate studies, two courses proved especially interesting: Embryology and Histology. Little did I know or expect I would one day return to MTSU as a faculty member and teach these courses. I graduated from MTSU with a BS in Biology in 1976. Subsequent graduate study with Marion Wells, who was an outstanding mentor, fostered my interest in laboratory research. A concurrent graduate teaching assistantship introduced me to the rewards of teaching. The interaction among a remarkable cadre of faculty and graduate students and Marion's encouragement prompted my decision to continue graduate study after the MS degree.

Admission into the Animal Physiology program at Mississippi State University led me to the toxicology laboratory directed by Jim Yarbrough. Jim was a master of the Socratic approach to guiding graduate student research, and he was very successful in funding his laboratory and training students. Although based in a toxicology laboratory, my dissertation work led to an interest in endocrine system physiology. The time at State was especially productive because I not only earned my PhD but also met and married my very understanding wife, Bonnie. In fact, the wedding was a laboratory affair with faculty, fellow graduate students, technicians, and student workers contributing to and/or participating in the ceremony and reception.

In 1982, I began postdoctoral training at the Harbor-UCLA Medical Center in Torrance, California, working in the laboratory of Delbert Fisher. This was a unique opportunity for someone from rural Tennessee, both culturally and scientifically. Dr. Fisher ran the posterior pituitary laboratory and directed the Perinatal Research Laboratory, a collection of clinical and basic science investigators studying organ system development in the fetus and newborn. The international character of the laboratory faculty and staff of approximately



M. Gore Ervin, Ph.D.

50 people became evident when a survey revealed representation by at least twenty-six different native languages. Needless to say this mix of cultures provided a unique and ongoing opportunity for cultural exchange. The Perinatal Laboratory also was a marvelous site for scientific training and education, mainly due to the highly productive group of principal investigators and the constant influx of trainees and visiting scientists from around the world.

My postdoctoral work focused on developing quantitative methods (radioimmunoassay and high performance liquid chromatography) for measuring physiological changes in the posterior pituitary hormones vasopressin and oxytocin. These measurement systems were applied to studies of vasopressin physiology during fetal development using chronically catheterized fetal sheep as the experimental model. This approach provided fetal assessments of the regulation of vasopressin secretion, physiological effects, and the receptors involved, and ultimately insight into the role of the fetus in determining amniotic fluid volume and composition.

Upon completion of my Perinatology fellowship, I joined the UCLA School of Medicine faculty as Assistant Research Physiologist and then Associate Professor in the Department

of Obstetrics and Gynecology. This allowed continuation of my research affiliation with the Perinatal Research Laboratory at Harbor and varied teaching opportunities, including laboratory training for clinical research fellows (neonatology and maternal/fetal medicine) and postdoctoral researchers, and annual water and electrolyte homeostasis lectures for 2<sup>nd</sup> year medical students. Research grants from the National Institutes of Health, American Heart Association, and Baxter Healthcare over the next decade allowed me to establish and maintain my research program focused on fetal and newborn kidney development. Collaborative efforts employing a ventilated preterm newborn lamb model also provided the opportunity to quantitatively assess cardiovascular and renal function changes during the transition from fetal to newborn life and to assess the effects of fetal and maternal treatments on the maturation process.

The offer of a faculty position in the MTSU Biology department led to relocation of my family (which now included daughter Beth and son Brian) to Murfreesboro in 1997. Although I was able to maintain an active research presence for several years through collaborative efforts, recent research activity has declined. A significant amount of my time is devoted to teaching, and I have had the opportunity to work with some truly outstanding students. After teaching a variety of courses during the first few years, since 2001 I have annually taught in the Human Anatomy and Physiology series and upper division courses in Embryology, Histology and General Physiology. 2001 also marked promotion to Professor and appointment as Graduate Coordinator for the Biology Department MS program (which currently includes approximately 70 graduate students).

My active participation in the Academy began in 1998 when I was asked to take the Managing Editor position for the *Journal of the Tennessee Academy of Science*. The next nine years as *Journal* editor were challenging and busy at times, but also very rewarding. I had the opportunity to interact with a diverse collection of talented investigators and reviewers from across the state and region, an experience enhanced by a knowledgeable and committed group of Section Editors. My time as *Journal* editor also provided the opportunity to work

closely with an extraordinary group of individuals who have ably directed Academy activities over the past decade. I am thankful I had the opportunity to serve as *Journal* editor, and I am most appreciative for the efforts of the new Managing Editor, Stephen Stedman, who has already made great strides in advancing the *Journal*.

I believe the Tennessee Academy of Science to be a truly outstanding organization, and I acknowledge the many talented individuals who have contributed, and continue to contribute, to the varied programs sponsored by the Academy. The Academy's stated purpose is to "promote teaching and learning about science in the state of Tennessee." The annual meetings and the *Journal*, since 1926, are clear embodiments of this goal. Another program, the Collegiate Division, annually provides a unique forum for undergraduate students to present and to discuss their research among their peers. The Collegiate Division meetings have been highly successful but I believe underutilized. These meetings are essential to advancing undergraduate research, and students from across the state should be encouraged to submit their work to one of the three regional spring Collegiate meetings. At the secondary school level the Tennessee Junior Academy of Science represents the oldest organization of its type in the state and one of the oldest in the nation. Under the direction of Jack Rhoton, the Junior Academy encourages secondary school students to conduct independent research projects and to submit written descriptions of their findings. A panel of readers selects the top twenty-five, and selected students are invited to present their work before peers and a panel of judges. Over the past several years I have had the distinct pleasure to serve as one of the judges and the experience has been both rewarding and enlightening. The participants are truly outstanding young men and women, and it is reassuring to know our future will be in their very capable hands.

In closing, I invite all academy members to join me in this "Year of Science, 2009" and to commit to do all we can both to promote the Academy and its many programs and to seek new avenues where the Academy can "promote teaching and learning about science."

## PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE 2008

TERESA L. FULCHER, SECRETARY, TAS

*Pellissippi State Technical Community College, Knoxville, Tennessee*TENNESSEE ACADEMY OF SCIENCE  
EXECUTIVE COMMITTEE MEETING  
18 APRIL 2008

President Cindy Smith-Walters called the meeting of the Tennessee Academy of Science (TAS) Executive Committee to order at 6:34 PM CDT in the Massey Board Room on the campus of Belmont University, Nashville, Tennessee. Attendees were President-elect Gore Ervin, Past President George Webb, Treasurer Steven Murphree, Secretary Teresa Fulcher, Managing Editor Stephen Stedman, Junior Academy of Science Director Jack Rhoton, Meeting Coordinator Michael Redding, Education Committee Chairperson Kim Cleary Sadler, Publicity and Research Committee Chairperson Mandy Carter-Lowe, and member-at-large William Andrews.

A motion to approve the minutes of the 15 November 2007 meeting of the Executive Committee was made by Michael Redding and seconded by William Andrews. The motion carried.

REPORTS FROM OFFICERS  
AND DIRECTORS

*Past President*—George Webb recommended using Academy funds to hire a student to assist Electronic Communications Director Jim Howard with the web site, contingent on Howard's approval. Treasurer Murphree confirmed that an electronic form is available to requisition pay for student assistance in Academy work. George Webb also recommended that regular Academy members be encouraged to become sustaining or supporting members. Treasurer Murphree agreed to e-mail individuals with expiring memberships and encourage the upgrade. After a discussion regarding the dues for the different levels of membership, Michael Redding made a motion to propose to the full membership of the Academy at the November 2008 annual meeting an increase in the annual dues as follows: sustaining membership dues increase from \$35.00 to \$50.00, supporting membership dues increase from \$40.00 to \$100.00, and life membership dues increase from \$300.00 to \$400.00. William Andrews seconded the motion and the motion carried unanimously. If passed by the full membership in November, the increase would go into effect immediately. George Webb recommended that letters to acknowledge the additional contributions of members be sent by the President of the Academy.

*President-elect and 2008 Program Chairperson*—Gore Ervin described plans for the joint meeting with the Tennessee Science Teachers Association (TSTA) in November of 2008.

TSTA will host a mixer on Thursday November 20<sup>th</sup> from 6:00-8:00 PM. The TAS Executive committee will meet after that mixer. Two TAS workshops are planned for Saturday morning November 22<sup>nd</sup>: one workshop on nanotechnology and another workshop on teaching evolution led by Dr. Michael Gibson. The poster session is scheduled from 11:00 AM until 12:00 PM on Friday and lunch will be combined with TSTA. Governor Phil Bredesen is scheduled to deliver the address. Awards will be presented during the Friday lunch. The first round of technical sessions is scheduled for Friday afternoon and the second round will occur on Saturday morning. The TAS business meeting is scheduled for 8:15 or 8:30 on Saturday morning. President-elect Ervin noted that TAS must provide necessary audio-visual equipment to be used in the TAS technical sessions and that notices should be sent to section chairs informing them of this requirement. Meeting coordinator Michael Redding reiterated the need to fully negotiate the details of cost sharing with TSTA for this meeting. George Webb, Steve Murphree, and Michael Redding will meet with TSTA representative Barry Farris to work on an agreement. Expenses should be proportional based on the number of registrants.

*Treasurer*—Steven Murphree discussed the Treasurer's Report showing a total income of \$5,312.53 from 1 January 2008 through 4 April 2008 and expenses of \$9,130.86 for the same period. The checking account balance as of 18 April 2008 was \$19,981.34, with total assets at \$199,948.09. Michael Redding moved to accept the treasurer's report. Gore Ervin seconded the motion. The motion carried.

*Managing Editor*—Stephen Stedman reported that AllenTrack Essentials, a web-based manuscript submission, tracking, and peer-review software program, was activated in early March 2008. Since that time, three manuscripts have been submitted for review. These have already been sent to section editors. Editor Stedman reported that he is pleased with the technical support from Allen Press Inc. Editor Stedman reported that contents of the January-April issue (83:1-2) of the Journal of the Tennessee Academy of Science have been received and are ready for submission to Allen Press via AllenTrack Essentials.

Editor Stedman also reported that James Huggins, one of two section editors for Zoology, has resigned his position. Until another section editor is named, Karl Joplin will assume all manuscript review duties for Zoology. Editor Stedman received boxes of past issues of the *Journal*, and created two archival sets. These sets will be kept with the Managing Editor and additional copies of past issues of the *Journal* have been given to Treasurer Steven Murphree for distribution based on requests for back issues.