

PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE 2007

TERESA L. FULCHER, SECRETARY TAS

*Pellissippi State Technical Community College, Oak Ridge, Tennessee*TENNESSEE ACADEMY OF SCIENCE
EXECUTIVE COMMITTEE MEETING
20 April 2007

President George Webb called the meeting of the Tennessee Academy of Science (TAS) Executive Committee to order at 6:33 PM CDT in the Massey Boardroom of the Massey Business Center on the campus of Belmont University, Nashville, Tennessee. Attendees were President-elect Cindi Smith-Walters, Past President John Harris, Treasurer Steven Murphree, Secretary Teresa Fulcher, Managing Editor Gore Ervin, Junior Academy of Science Director Jack Rhoton, Collegiate Division Director Fred Matthews, Meeting Coordinator Michael Redding, Education Committee Chairperson Kim Sadler, Publicity and Research Committee Chairperson Mandy Carter-Lowe, Members-at-large Andy Andrews and Jeff Boles, Local Arrangements Committee Chairperson Nancy G. Morris, and Department of Education Liaison Linda Jordan. Prior to the meeting, the Executive Committee enjoyed dinner in the Massey Boardroom. On behalf of the Executive Committee, President Webb expressed appreciation to Dr. Steven Murphree for organizing the meeting. President Webb introduced Dr. Kim Sadler as the new Chair of the Education Committee and Andy Andrews as the new Member-at-large, anticipating significant contributions from both.

A motion to approve the minutes from the November 2006 meeting was made by Michael Redding and seconded by John Harris. The motion passed.

REPORTS FROM OFFICERS
AND DIRECTORS

Past President John Harris reported that no one has been identified to serve as Managing Editor of the *Journal*. Past President Harris would appreciate any suggestions. Gore Ervin's capable service over the past years was noted. Michael Redding inquired as to the possibility of offering a financial incentive to the Managing Editor of the *Journal*. Past President Harris recalled that at one time the Managing Editor was paid, but the arrangement was not clearly defined and was problematic. Past President Harris emphasized that if we agree to pay someone, we would need to clearly outline guidelines for the stipend. Managing Editor Ervin commented the new Managing Editor could be based at any location, but the Academy has benefited from MTSU coverage of postal charges and other incidentals that would otherwise be charged to the Academy. Managing Editor Ervin also remarked that while the existing database of reviewers in all areas meets the

current needs, the editorial board of the *Journal* does need to be updated.

President-elect and 2007 Program Chairperson Cindi Smith-Walters reported that she has been in contact with U.S. Congressman Bart Gordon's office. He has agreed to speak at the 2007 TAS meeting, or send someone from the House Science and Technology Committee. Meeting Coordinator Redding agreed to meet with President-elect Walters in the summer to discuss details of the program. Meeting Coordinator Redding will mail the summer call for papers. The fall meeting will occur on Friday, November 16, 2007.

Treasurer Steven Murphree discussed the Treasurer's Report provided below:

Treasurer Murphree reported that he has been able to convert from Excel to Quicken software. He commented that the Academy annual meeting resulted in a \$1000.00 profit. Meeting Coordinator Redding questioned whether the Junior Academy expenses were used to support research. Tennessee Junior Academy of Science (TJAS) Director Rhoton reported that most of the cost of the TJAS is for printing. Redding asked if a transition to an electronic *Handbook and Proceedings of the Tennessee Junior Academy of Science* would be possible and less costly. Director Rhoton responded that many teachers still do not utilize electronic mail and do not download files and expressed reservations to an exclusive electronic format. However, Rhoton supported the idea of posting selected papers from the Junior Academy on the TAS website.

According to the Treasurer's records, TAS membership currently stands at 461 members, 100 of which are life members and non-revenue generating. Treasurer Murphree emphasized the importance of increasing individual and institutional memberships. Director Rhoton suggested that formal recognition of thanks be sent to all Institutional Sustaining Members.

Treasurer Murphree reported that based on communication with the IRS, TAS would not have to file a tax return unless the income exceeded \$25,000. Michael Redding moved for approval of the budget report. Cindi Smith-Walters seconded the motion and the motion carried.

Managing Editor Gore Ervin discussed the following report:

"The January and April 2006 issues were combined as 81:1-2. This issue contained the proceedings and abstracts of the 2005 Academy meeting and one research paper. The July and October 2006 issues were also combined (81:3-4) and included five research papers and the Abstracts of the spring 2006 Collegiate meetings.

"There were a total of nine manuscripts submitted during calendar year 2006, an increase of two over the number

TAS Income and Expense
7/1/2006 through 5/18/2007

Category Description	7/1/2006-5/18/2007
INCOME	
Annual Meeting Income	5,005.00
Gift Received	268.85
Institutional Membership Due	4,500.00
Invest Inc	3,069.91
Library Journal Subscriptions	1,830.00
Membership Dues	6,950.00
Other Inc	329.00
Page Charge for Journal	990.00
TOTAL INCOME	22,942.76
EXPENSES	
Uncategorized	400.00
Annual Meeting	4,035.55
Bank Charge	10.00
Collegiate Division	300.00
Dues and Fees	974.90
Journal printing	4,166.46
Junior Academy of Science	7,156.30
Misc. Expenses	451.35
Plaques	84.39
Postage and Delivery	7.08
Science Fair	1,190.00
TJAS Award	2,547.00
Travel Expenses - Exec. Comm.	1,832.08
Treasurer	98.62
Visiting Scientist Program	350.00
TOTAL EXPENSES	23,603.73
OVERALL TOTAL	-660.97

TAS Balance Sheet - As of 5/18/2007

As of 5/18/2007

Account	5/18/2007 Balance
ASSETS	
Cash and Bank Accounts	
Checking	12,279.13
Savings	0.00
Star Fund	168,418.93
TOTAL Cash and Bank Accounts	180,698.06
TOTAL ASSETS	180,698.06
LIABILITIES	0.00
OVERALL TOTAL	180,698.06

submitted in 2005. Five of the 2006 submissions were published in the fall 2006 *Journal* issue (81:3-4) and two will appear in the spring 2007 issue (82:1-2). This issue will be distributed to the Academy members in May. Two manuscripts submitted in late 2006 are still under review.

"The first submission for 2007 was received 21 April 2007 and will be sent to two referees for review.

"Near-term plans include the updating and expansion of the Instructions to Authors for posting on the TAS Website and adoption of electronic submission and review distribution protocols."

Editor Ervin added that Allen Press has a journal management system called AllenTrack. When a manuscript is submitted, it goes to Allen Press, is encoded to their software, and automatically sent to reviewers. Reviewers make

comments in text boxes. If the manuscript is accepted and doesn't need revisions, the manuscript is added to their system for printing. The cost is \$400.00 per year for the first three years plus an additional \$40.00 per manuscript. Advantages of this system compared to Adobe Professional were discussed. Editor Ervin agreed to gather additional information to present at the fall meeting.

Meeting Coordinator Michael Redding reported that Nancy Morris was actively working on arrangements for the 2007 meeting.

Collegiate Division Director Fred Matthews reported that three meetings were held during spring 2007. The Eastern Division meeting was held at Southern Adventist University. The Middle Division meeting was held at Tennessee State University with 19 oral presentations and approximately 40 people attending. The Western Division meeting was held at LeMoyné-Owen College with between 17 and 30 papers presented. Director Matthews reported that while \$300.00 had been allotted to support each Collegiate Division Meeting, LeMoyné-Owen College had requested reimbursement of \$482.00. The importance of properly funding the Collegiate Division of the Academy was discussed.

Member Andy Andrews moved to reimburse expenses of hosting institutions for the Collegiate Division meeting at \$30.00 per student presentation (including both oral and poster presentations) up to \$600.00. Member Jeff Boles seconded the motion. After discussion of the motion, Jeff Boles presented an amendment to the motion stating that hosting institutions could be reimbursed up to \$300.00 with fewer than 10 student presentations (establishing a minimal reimbursement of \$300.00). Member Andrews accepted the amendment. Editor Ervin presented an additional amendment stating that reimbursement would be payable upon submission of abstracts for publication in the *Journal*. Member Andrews accepted the amendment. After additional discussion, the question was called and the motion with amendments was restated: Effective 2008, the Tennessee Academy of Science will reimburse expenses of hosting institutions for the Collegiate Division meeting at \$30.00 per student presentation (including oral and poster presentations) with a minimal reimbursement of \$300.00 and a maximum reimbursement of \$600.00. Reimbursement is contingent upon submission of abstracts for publication in the *Journal*. The motion passed with one dissent.

Director Matthews initiated a discussion regarding the role of the undergraduate at the TAS annual meeting. Director Matthews stated that since the Collegiate Division was for undergraduates, perhaps they should not be allowed to present at the annual meeting and be steered instead to the Collegiate Division meetings, strengthening those gatherings. After considerable discussion the Executive Committee took no action, electing to continue the two-tiered system, encouraging undergraduates to participate in the Collegiate Division Meeting but not barring them from presentations at the Annual meeting.

Editor Ervin made a motion to allot a \$250.00 award budget to the Collegiate Division Meeting coordinators to distribute to presentations judged to be of meritorious quality in an attempt to encourage Collegiate Division student presentations. Michael Redding seconded the motion and the motion passed.

Electronic Communications Director James Howard was not in attendance but submitted a brief report to President

Webb indicating that the TAS website was operational and he planned to work on updates and improvements over the summer.

Junior Academy of Science Director Jack Rhoton submitted the following report:

“The 2007 spring meeting of the Tennessee Junior Academy of Science (TJAS) met Friday, April 20, 2007, on the campus of Belmont University. A total of twenty-five students were invited to present their research papers. This year ninety-two students from throughout the state were involved in TJAS research. The top TJAS research papers will be published in the upcoming issue of the *Handbook and Proceedings of the Tennessee Junior Academy of Science*. The winners of the top two papers each received \$500 and the six other top winners each received \$200.

“During the April meeting, a plaque and a small honorarium (\$100) was presented to an outstanding secondary science teacher from each of the three divisions of the state. Recipients of this year’s awards are: Jennifer Hill (Middle School Science Teacher), Lamar School, Jonesborough; Brenda Royal (AP Biology Teacher), Hume-Fogg Academic High School, Nashville; Renee Wyatt (Biology, Chemistry Teacher), Camden Central High School, Camden. These TAS outstanding secondary science teacher awards recognize teachers for their outstanding contribution to science teaching and for stimulating and inspiring students to an active interest in science.

“In addition, TAS supported four \$100 awards to science fair winners in the Upper East Tennessee Science Fair on April 7, 2007. The science fair was held on the campus of East Tennessee State University. The recipients in the biological sciences category are Andrew Bible, Hal Henard Elementary School, Greeneville, and Rosemary McVeigh, University School, Johnson City. The recipients in the physical science category are Brittany Steagall, Shady Valley Elementary School, Shady Valley, and Alex Wheelock, Indian Trail Middle School, Johnson City.”

Director Rhoton wanted to express thanks to the TJAS panel of judges: Dr. Lewis Myles, Dr. Gore Ervin, Dr. Paul Koehler, and Dr. Preston MacDougall. Director Rhoton also commented that a story on the Junior Academy was featured on the “Chemical Eye” Preston MacDougall commentary on NPR station WMOT.

Visiting Scientist Program Director Michael Daley was not present but submitted a report, a portion of which follows:

“A survey of the thirty-eight academy members participating in the Visiting Scientist Program found that none of the participants have made a visit to a K-12 class as part of the program.

“As an outcome of our last committee meeting, Cindi Smith-Walters, in collaboration with Cynthia Allen at MTSU, created both a hard-copy brochure for distribution to teachers and an electronic brochure which will be posted on the TAS website by J. Howard. Cindi will be submitting an invoice for the time that Cynthia Allen needed to create these materials.

“The hard-copy version of the brochure was sent out via email to TSTA membership by Barry Farris, TSTA treasurer. As a result I have received two inquiries from teachers about the program. Susan McMahon, Pellissippi State Technical Community College, is scheduling visits to 4th–5th grade classes at a Knox County School. As an action item, hard copies of the brochure should be printed for distribution.

“The following procedures have been developed in response to an inquiry about the program. First, I ask the requester what areas of science would be the best match for the goals of the K-12 science class and what dates are best for the visit. Second, with that information I email all VSP participants in the area of the school. Any suggested modifications or additions to these procedures would be appreciated.”

Cindi Smith-Walters added that an invoice for \$350.00 for development of the brochure was submitted to President Webb. The TAS Executive Committee had previously appropriated up to \$500.00. President Webb will submit that invoice to Treasurer Murphree.

State Department of Education Science Consultant Linda Jordan provided information regarding the American Diploma Project. Consultant Jordan reported that Tennessee has just signed on to be a part of the project. Language arts and mathematics must be aligned with “Achieve”. This will involve developing “science anchors” which are similar to focal points describing what students need to know in certain grade levels.

Consultant Jordan reported that state science education is in a cycle of curriculum adoption. To have standards that reflect updates in information, state standards are revised and used in adoptions. Consultant Jordan commented that the Tennessee Academy of Science had previously assisted in reviewing standards and curriculum materials, and the Department of Education is again asking for assistance with revisions to begin this summer. Interested members should contact Linda Jordan directly.

Consultant Jordan reported that the High School Redesign Committee is making a recommendation that Tennessee offer a series of courses: Chemistry, Biology, and Physics as the default path. Consultant Jordan commented that the impact of this change would be significant. She encouraged TAS members to go to the State Board of Education web site for more information on this proposal.

AAAS Section Y Representative Michael Redding reported on the 2007 AAAS/NAAS meeting as follows:

“Representing the TAS, I attended the Annual Meeting of the American Association for the Advancement of Science in San Francisco on February 15–17, 2007. The following comments summarize my activities and information deemed pertinent to the TAS.

“The Section on General Interest in Science and Engineering (Section Y) held its annual business meeting on February 17. Chairperson Carol Rogers presided. Lynn Elfner, CEO of the Ohio Academy of Science, will assume the chair at the close of the meeting for the 2007–08 cycle. John Safko, Section webmaster, reported again about ineffective linkage and use of the Section’s website now hosted by the AAAS at <http://science.aaas.org>. Section Secretary JoAnn Valenti announced that the theme of the 2007 AAAS meeting would be ‘Science and Technology for a Global City’. There followed a discussion about potential Section sponsored symposia for the 2008 AAAS meeting. One proposal, proposed and organized by Lynn Elfner, is entitled ‘Plato’s Progeny: Academies of Science in a Global Perspective.’ The symposium, if approved, will critique, compare and contrast the history, contemporary organization, functions, and future value of academies of science to society. Other suggestions included symposia tentatively entitled ‘International Organizations,’ ‘Mentoring Young Scientists,’ and ‘Commercial Viability of Scientific

Publishing.' As a point of general interest there are about 150-160 symposia each year, about half organized by the various Sections and about half by the AAAS itself.

"State academies of science again were asked to promote efforts to increase affiliation with Section Y by AAAS members who do not already specify a primary affiliation with a particular section. Affiliations may be designated during annual renewal or at any time via the member services options on the AAAS website.

"Due to a late change of schedule that was not corrected in the printed AAAS schedule, I and many other delegates missed the annual Assembly of Delegates of National Association of Academies of Science (NAAS); however, 2008 President-elect David Bass (Oklahoma) presided over an informal session at the originally scheduled time. He apologized for the miscommunication, allowed us to cast votes for the annual election cycle, and briefed us about the proceedings of the earlier formal meeting. Most of the information pertained to the conduct and financing of the annual American Junior Academy of Science (AJAS), which is the principle activity of the NAAS. At the end of the AAAS meeting Barbara Gadegbeku (New Jersey) assumed the President's position, replacing outgoing President Michael Strauss (Virginia). Noted was the recent untimely death of NAAS Past President (2005-06) and AAAS Fellow Kathleen Donovan (Oklahoma).

"The NAAS Delegates Workshop was held on February 17. The workshop, a reprise of similar efforts in 2005 and 2006, consisted of a panel presentation by representatives of the member organizations of the National Academies of Science (NAS). Three of the member academies are honorary in nature, including the National Academies of Science, Engineering, and Medicine. The fourth and largest member, the National Research Council, is a group commissioned by Congress to provide guidance to the Congress whenever requested. Its primary responsibility is to organize and manage working groups composed of volunteer experts to analyze and recommend solutions to important problems relating to public policy. The NRC produces a steady stream of reports, books, and other publications relating to their research projects, many of which are available free-of-charge online or in hard copy. The full list of available publications can be found at www.nationalacademies.org.

"The thematic title for this year's Workshop was 'The Economy and Education: Shall the Twain Ever Meet?' Quoting David Ward, president of the American Council on Education, 'There is a significant disconnect between the general public and policy-makers and higher education leaders on the subject of maintaining and enhancing our global competitiveness. The public views our global competitiveness as a threat to wage levels, while policy-makers view the issue as a need for a better-prepared workforce. What is clear is that higher education leaders and policy-makers must do a better job of communicating with the public about the importance of math and science education to the economic success of future generations of Americans.'

"The following rhetorical question was posed at the Workshop. If the 21st Century economy is driven by education and innovation, are those who push for Federal and State R&D appropriations and science-based economic development and innovation policy working well together to affect policy with those who want to improve STEM education, or

are they just using each other to justify their existence? In other words, is there evidence of a synergy afoot or just parallel processing toward different ends and never the twain shall meet?

"After brief statements by representatives of NAS specializing in educational issues, conversation centered on the need to promote STEM education and careers in under-represented groups, particularly minorities and women. Moreover, a special need exists in mathematics and physical sciences, including engineering, where the United States is producing far fewer professionals than China and India."

REPORTS OF COMMITTEES

Auditing Committee Chairperson Steven Murphree reported that a Belmont University Accounting professor and students will conduct audits of the Tennessee Academy of Science in August to early September.

Education Committee Chairperson Kim Sadler distributed information on the launching of the Tennessee Department of Education Environmental Website (www.eeintennessee.org).

Long-range and Strategic Planning Committee Chairperson John Harris reported that the Long-range and Strategic Planning Committee recommended the discussion of funding for the Collegiate Division and Regional Science Fairs. Chairperson Harris commented that Collegiate Division funding had already been addressed and that Science Fair funding was pending on the agenda.

Publicity and Research Committee Chairperson Mandy Carter-Lowe discussed the activity of the Publicity and Research Committee. A portion of that report follows:

"The status of pictures from the November 2006 TAS meeting is uncertain at this time. There was a malfunction in my camera, so one was borrowed from Steven Hamilton of APSU. Digital pictures were taken on this camera of the General Assembly and business meetings, symposium, and poster session. I contacted Dr. Hamilton this spring to check on the status of the pictures. I will follow up on the status of the pictures after the spring executive committee meeting.

"Certificate paper (100) and seals (120) were ordered to prepare awards for student winners of the November 2006 meeting. The ordered amount would cover the certificates for the meeting and potential request from regional science fairs. The total of the order was \$88.55 and a reimbursement check was received from Steven Murphree for my expenses.

"Certificates for the November 2006 TAS meeting were prepared and mailed to students. A total of 52 certificates were prepared. The certificates were mailed to an identified contact if the institution had multiple winners. If an institution had only one winner, the certificate was mailed directly to the student. Along with each certificate, students received an offer for a free one-year membership to TAS and a membership application. This application was marked "2006 Student Winner" by me and included my initials. In instances where winning presentations included multiple presenting student authors, awards were sent to all students but only the first author received an offer of TAS membership.

"The botany poster session of the November 2006 meeting was not judged. Students presenting posters in this section were all mailed certificates acknowledging their participation. As a result of this mistake, the botany section chair, Claude

Bailey, and the TAS Meeting Coordinator, Michael Redding, agreed to offer each student a TAS membership.

“At the November 2006 Executive Committee meeting Michael Daley communicated that he had not received certificates from the November 2005 meeting for his students. I reprinted these two awards and mailed them, along with the awards for the University of Memphis 2006 winners, to Dr. Daley for distribution.

“In early April, George Webb informed me that Roger D. Applegate, Small Game Coordinator for the Tennessee Wildlife Resources Agency in Nashville, had volunteered to serve on the research committee for TAS. I have received his contact information, but no communication has occurred between us at this time.” Treasurer Steven Murphree requested that the certificates contain the winner’s first name rather than just the first initial.

OLD BUSINESS

Local Arrangements Chairperson Nancy Morris thanked all members of the committee and commented that Volunteer State is looking forward to hosting the 2007 meeting of the Academy. She noted that while they are one-year post-tornado, progress is slow. She commented that the construction to the Administration building is not complete and they lost an auditorium and 8 classrooms. However, Chairperson Morris is confident that there will be plenty of room for the TAS sessions. The TAS Plenary session will be in the gymnasium with a stage and multimedia capabilities. The poster session will be in the back of the gymnasium.

President Webb reported that plans for the joint meeting with TAS/TSTA in 2008 are progressing. Diane Vaughn is the TSTA president, and the meeting is scheduled for the Sheraton Music City in Nashville. A meeting is scheduled in July to work on plans. Meeting Coordinator Redding will be in touch with TSTA regarding room scheduling and publication of our program. Past President Harris noted that the number of hotel rooms to book should be carefully considered and that TAS members need to identify themselves as such when booking hotel rooms.

President George Webb presented the revision of the Tennessee Academy of Science Statement on the Teaching of Evolution. He commented that the statement had been rewritten to model the AAAS statement regarding evolution more closely. Past President John Harris made a motion that the Tennessee Academy of Science Executive Committee accept the statement and distribute it to the general membership for a vote at the Annual Business meeting in November 2007. Member Andy Andrews seconded the motion and the motion carried.

NEW BUSINESS

Past President John Harris asked that the Executive Committee consider the funding for the regional science fairs. He recommended that the committee make a decision regarding continuing funding specifically for awards on behalf of the Academy, or providing funding to the fairs with more flexibility as to how the money could be used. Director Jack Rhoton commented that providing funding for science fairs allowed the Tennessee Academy of Science to provide incentives to students to participate in scientific research.

Member Andy Andrews noted that for the Southern Appalachian Science and Engineering Fair specifically, there has been an explosion of “special awards” and the money would be of significant benefit to the general budget. It was noted that the regional science fairs differ in specific needs. After additional discussion, Editor Gore Ervin made a motion to make \$400.00 available to the regional science fairs in the State, to be used at the discretion of the science fair operators, with the Academy acknowledged as a donor. President-elect Cindy Smith-Walters seconded the motion and the motion carried.

President Webb reported that Dr. Al Hazari is beginning discussion with The University of Tennessee in Knoxville regarding hosting the 2009 meeting of the Academy.

Education Chairperson Sadler asked if the Academy would consider changing the standing date of Friday before Thanksgiving for the Academy Annual meeting. She noted that the meeting of the Academy always conflicts with the meeting of the Tennessee Science Teachers Association, and because that is a larger meeting held at hotel convention centers, facilities are booked years in advance. She pointed out that our meeting is traditionally held on college or university campus sites and scheduling would be more flexible. Treasurer Murphree mentioned that changing the date could result in conflicts with other organizations; for example, the American Chemical Society meeting is always in November. Meeting Coordinator Redding said he is open to changing the date but thinks it is important to keep the meeting on a Friday. President Webb asked that all Executive Committee members consider potential conflicts to the first Friday in November 2009 and report at our fall Executive Committee meeting.

Member Jeff Boles moved to adjourn the 20 April 2007 meeting of the Executive Committee of the Tennessee Academy of Science. Meeting adjourned at 10:10 PM CDT.

TENNESSEE ACADEMY OF SCIENCE EXECUTIVE COMMITTEE MEETING 15 November 2007

President George E. Webb called the meeting of the Tennessee Academy of Science (TAS) Executive Committee to order at 7:12 PM CDT in the Carpeted Dining Room, Wood Campus Center, on the campus of Volunteer State Community College, Gallatin, Tennessee. Attendees were President-elect Cindi Smith-Walters, Past President John Harris, Treasurer Steven Murphree, Secretary Teresa Fulcher, Managing Editor Gore Ervin, Director of Electronic Communications Jim Howard, Junior Academy of Science Director Jack Rhoton, Visiting Scientist Program Director Michael Daley, Meeting Coordinator Michael Redding, Publicity and Research Committee Chairperson Mandy Carter-Lowe, Membership Committee Chairperson Karen Kendall-Fite, Local Arrangements Committee Chairperson Nancy G. Morris, Members-at-large Andy Andrews and Steve Hamilton, and invited guest Stephen Stedman. Prior to the meeting, the Executive committee enjoyed dinner provided by Volunteer State. President Webb expressed appreciation on behalf of the Executive Committee.

A motion to approve the minutes from the April 2007 meeting was made by Michael Redding and seconded by Gore Ervin. The motion passed. President Webb introduced Dr. Stephen Stedman of Tennessee Technological University and welcomed him to the meeting.

REPORTS FROM OFFICERS AND DIRECTORS

President-elect and 2007 Program Chairperson Cindi Smith-Walters reported that Dr. Linda Slakey, Director of the Division of Undergraduate Education for the National Science Foundation would be the TAS symposium speaker. While U.S. Congressman Bart Gordon is unable to attend the meeting, Congressman Gordon's Chief of Staff, Kent Syler will deliver the TAS plenary address.

Meeting Coordinator Michael Redding presented data on the numbers of oral and poster presentations at TAS annual meetings since 2002. Scheduled for the 2007 meeting are 81 oral and 81 poster sessions for a total of 162 presentations. Coordinator Redding noted these numbers represent the highest presentation totals since the 2002 annual meeting. Coordinator Redding pointed out that participation was particularly high in Botany, Cell and Molecular Biology, Chemistry, Zoology, and Science and Math Teaching. Coordinator Redding praised the efforts of Section Chairs.

Past President John Harris had no report, but he did point out an error in the listing of the 2007 Executive Committee. Dr. Harris was incorrectly listed with an MTSU affiliation.

Treasurer Steven Murphree discussed the Treasurer's Report provided below:

Treasurer Murphree reported that the Tennessee Academy of Science Certificate of Exemption had been filed with the Tennessee Department of Revenue. He also acknowledged that the Academy has four new institutional members: Volunteer State Community College, The University of Tennessee at Knoxville, The University of Tennessee Space Institute, and Motlow State Community College. President Webb asked if the Academy provides different categories for individual membership. Treasurer Murphree responded that in addition to the regular membership option, members can select "sustaining" or "supporting" memberships. The two higher membership categories are not well represented, with only 15-20 members in a given cycle. President Webb offered to write thank you letters to those members supporting the Academy beyond their regular membership dues. There were no objections from the Executive Committee.

Managing Editor Gore Ervin discussed the following report:

"Nine manuscripts were submitted for review during calendar year 2006. Five papers were published, two are in press, and two are awaiting author revision and return.

"To date, only six papers have been submitted for review in 2007. Two papers have been accepted and copy edited for submission for publication, two papers have been accepted (pending author revision), one paper was rejected, and one manuscript is still in review.

"The January-April 2007 issue (82:1-2) has been submitted to Allen Press and will be published in December. Included are Executive Committee meeting minutes, proceedings and abstracts of the 2006 Academy meeting, Academy announcements, two research papers and two book reviews. The combined July-October 2007 issue will contain the abstracts of the spring 2007 Collegiate meetings and at least two manuscripts. The final number of included manuscripts will be determined by how many pending revisions are returned (currently 4) by December 1, 2007. Mailing of this issue will occur in late December or early January.

TAS Income and Expense 11/15/2007 7/1/2007 through 11/15/2007

CASH BALANCE-JULY 1, 2007	\$11,512.87
INCOME	
Div Income	2,078.48
Gift Received	15.00
Library Journal Subscriptions	510.00
Meeting Registration	1,530.00
Membership Dues	8,640.00
Page Charges for Journal	450.00
TOTAL INCOME	13,223.48
TOTAL CASH AVAILABLE	\$24,736.35
EXPENSES	
Annual Meeting	1,882.24
Bank Check Fee Charge	3.00
Junior Academy of Science	3,044.32
Renewal Fee	350.00
TJAS Research Grants	1,070.00
Travel Expenses of Executive Comm.	93.28
Treasurer	11.51
TOTAL EXPENSES	6,454.35
CASH BALANCE-NOVEMBER 15, 2007	\$18,282.00
Income	13,223.48
Expenses	6,454.35
Cash Increase	6,769.13
BREAKDOWN OF HOLDINGS	
Checking Account, US Bank	18,282.00
US Postal Service, Cookeville, TN	170.24
US Postal Service, Lawrence, KS	222.09
TAS HOLDINGS-November 15, 2007	18,674.33
TJAS TRUST FUND (Vanguard Star Fund)	
(9,002.839 shares 11/15/07)	
Account Value-11/15/07	\$187,889.25
TOTAL VALUE OF HOLDINGS- November 15, 2007	\$206,563.58

"Pending Executive Committee approval, the new Managing Editor, Dr. Stephen Stedman, will handle preparation of copy and production of issues 1-2, volume 83, 2008. This issue will include the profile of the new President for 2008, Executive Committee meeting minutes, proceedings and highlights of the 2007 annual Meeting (description of host institution, special awards, abstracts of presented papers, and new members for 2007). Dr. Stedman also will handle all new manuscript submissions after January 1, 2008. The outgoing Managing Editor, Dr. Gore Ervin, will handle the production of issues 3-4 of volume 82 and will provide the compiled abstracts from the fall 2007 Academy meeting for inclusion in issues 1-2 of volume 83. The transition between Managing Editors is proceeding smoothly. To augment this transition the outgoing Managing Editor submits for Executive Committee consideration a proposal to adopt AllenTrack Essentials, a web-based manuscript submission, tracking, and peer-review software program marketed by Allen Press, Inc. Allen Press is the current *Journal* publisher.

"The contribution of a multi-volume collection of previous *Journal* issues to the Editorial office is gratefully acknowledged. Ms. Beverly Freeman, retired University of

Tennessee, Chattanooga, faculty member donated an extensive collection of *Journal* issues on behalf of her late husband, long-time TAS member Dr. John R. (Jack) Freeman, former Professor and Head of Biology at the University of Tennessee, Chattanooga. This donation fills several major gaps in the existing *Journal* collection and extends the *Journal* archives to volume 4, 1929.

"In anticipation of the pending Managing Editor change, I have contacted all the current Section Editors to assess their willingness to continue in this very important role. I want to gratefully acknowledge the current Section Editors for their past service to the Academy and the *Journal*. The current editors and their sections follow: Dr. James Caponetti (Botany); Dr. Charles J. Biggers (Cell and Molecular Biology); Dr. Martin V. Stewart (Chemistry); Dr. Michael L. Daley (Engineering); Dr. Norman Tolk (Ethics in Science and Technology); Dr. Michael Gibson (Geology and Geography); Dr. George E. Webb (History of Science); Dr. William K. Glunt (Mathematics and Computer Science); Robert O'Bannon (Medical Science); Dr. Jon H. Lowrance (Microbiology); Dr. Mari Weller (Physics and Astronomy); Dr. Sarah F. Barlow (Science and Math Teaching); Dr. James Huggins (Zoology I); and Dr. Karl H. Joplin (Zoology II).

"Many of the current Section Editors have indicated their willingness to continue for a 3-year term (January 1, 2008 to December 31, 2010). Therefore, I submit the following Section Editor nominees for approval by the Executive Committee: Dr. James Caponetti (Botany); Dr. Charles J. Biggers (Cell and Molecular Biology); Dr. Martin V. Stewart (Chemistry); Dr. Michael L. Daley (Engineering); Dr. Michael Gibson (Geology and Geography); Dr. George E. Webb (History of Science); Dr. William K. Glunt (Mathematics and Computer Science); Dr. Jon H. Lowrance (Microbiology); and Dr. Sarah F. Barlow (Science and Math Teaching).

"Dr. Robert O'Bannon will not be able to continue as Health and Medical Science Section Editor. The remaining Section Editors who have not confirmed their intentions will be contacted again. If they plan to continue, we can seek Executive Committee approval."

Editor Ervin made a motion to approve the slate of Section Editors for the *Journal* for a 3 year-term. Steve Hamilton seconded the motion and the motion carried.

Editor Ervin provided the Executive Committee with additional information on *AllenTrack* manuscript submission software. Manuscripts can easily be forwarded directly from the Section Editor to reviewers. Allen Press data shows a 10–20 percent increase in submissions when using *AllenTrack* software. The cost is \$495.00 for the first year and \$395.00 for subsequent years with an additional charge of \$25.00 per approved manuscript. *AllenTrack* provides unlimited e-mail support and four hours of concentrated training.

Jim Howard made a motion to adopt *AllenTrack Essentials* as the web-based manuscript submission system for the Tennessee Academy of Science. Michael Daley seconded the motion and the motion carried. President Webb expressed sincere thanks to Dr. Gore Ervin for his many years of service as the Managing Editor of the *Journal of The Tennessee Academy of Science*.

President Webb introduced Dr. David Hercules of the Department of Chemistry at Vanderbilt University. Dr. Hercules informed the Executive Committee about an initiative to the National Science Foundation (NSF) from

the State of Tennessee under the EPSCoR Program (Experimental Program for Stimulation of Competitive Research). The program is designed to improve the state infrastructure in science and engineering in the area of nanomaterials. Dr. Hercules explained that this program could allow faculty and students from smaller colleges and universities the opportunity to perform research at larger facilities, providing them with access to state of the art equipment and training. Funding could also be provided for educational seminars and conferences. Dr. Hercules provided the Executive Committee with handouts on the history and scope of the NSF EPSCoR program, and invited the Tennessee Academy of Science to submit a brief proposal to be a part of this research program. The NSF proposal is due by January 4th 2008, so ideas from the Academy would need to be received by December.

Electronic Communications Director James Howard reported that the website is working. Michael Redding expressed commendations to Director Howard for posting information quickly on the TAS website.

Junior Academy of Science Director Jack Rhoton submitted the following report:

"The 2007 annual meeting of the Tennessee Junior Academy of Science (TJAS) met on Friday, April 20, 2007, at Belmont University in Nashville. A total of twenty-six students were invited to present their research papers. This year, 92 students were involved in TJAS research from throughout the state. Prior to the April 20 meeting, a panel of readers selected twenty-six of the student papers for presentation at the annual meeting. The panel of judges at the annual meeting selected two top presenters. They are: Andrew Lu, White Station High School, Memphis, and Hairan Zhu, Martin Luther King School, Nashville. The title of Lu's paper was "The Suppression of Breast Cancer Angiogenesis and Metastasis by p 16 via Down Regulating of VEGF." Mr. Zhu's paper was titled "Effects of Dietary Fat and Presence of FOXM1 on Beta Cell Apoptosis." Both papers were published in the 2007 *TJAS Handbook and Proceedings of the Tennessee Junior Academy of Science*, along with eight other papers of the top ten winners. Also, an abstract of each of the presenters at the annual meeting was printed in the Handbook. A copy of the Handbook was sent to all high school science departments in Tennessee as identified by the Tennessee State Department of Education's Directory of Public Schools. All students and teachers who participated in the 2007 TJAS program received a copy of the Handbook.

"The Tennessee Academy of Science recognized four students in the Upper East Tennessee Science Fair held on the campus of East Tennessee State University on April 12, 2007. Two top prizes were given: one to the student who placed first in the Biological Sciences category and one to the student who placed first in the Physical Sciences category. In addition two students won Honorable Mention recognition: one from the Biological Sciences and one from the Physical Sciences category.

"It is customary each spring for the Tennessee Junior Academy of Science to recognize three outstanding science teachers, one from each region of the state. During the spring 2007 TJAS meeting, a framed certificate and a small honorarium (\$100) was presented to the following recipients: Ms. Jennifer Hill (Middle School Science Teacher), Lamar School, Jonesborough; Brenda Royal (AP Biology Teacher), Hume-Fogg Academic High School, Nashville; Renee Wyatt

(Biology, Chemistry Teacher), Camden Central High School, Camden. These outstanding secondary science teaching awards recognize teachers for their outstanding contribution to science teaching and for stimulating and inspiring students to an active interest in science.

"Mr. Ronnie L. Nixon has been named the recipient of the 2007 Tennessee Academy of Science Distinguished Science Teacher Award. Ronnie, who teaches chemistry and physics at Greenbrier High School, Greenbrier, will receive the award on November 16, during the Tennessee Academy of Science Annual Meeting at Volunteer State Community College in Gallatin. Begun in 1997, the awards program is designed to recognize individuals who demonstrate excellence in science teaching. This award is given annually to one Tennessee science teacher who has made significant contributions to the teaching and learning of science. In addition to the recognition, Mr. Nixon will receive from TAS a \$500 cash award, a plaque, and certificate."

Collegiate Division Director Fred Matthews was not in attendance and submitted no report.

Visiting Scientists Program Director Michael Daley reported that based on development and distribution of the Visiting Scientist Program brochure (by Cindi Smith-Walters and Cynthia Allen of MTSU), there have been requests for school visits. Director Daley reported visits to Dresden Middle School and Green Magnet Math and Science Academy (a Knox County School), and that arrangements were underway for a visit to Cascade Middle School. Director Daley wants to recruit more TAS members to participate in this program. He also recommended that the K-12 teachers using the program write one or two sentences describing their positive experience and these quotations be used for marketing purposes.

State Department of Education Science Consultant Linda Jordan was not in attendance.

REPORTS FROM COMMITTEES

Auditing Committee Chairperson Steven Murphree reported that Dr. Tommy Wooton of the Belmont University College of Business Administration was working with his students to conduct an audit of the Tennessee Academy of Science. The audit was not complete at the time of the meeting. John Harris recommended that the TAS undergo a formal audit with a certified public accountant every other year. He estimated the cost to be around 1000 dollars. John Harris also recommended that the TAS Treasurer be bonded for protection in the amount of at least 20,000 dollars. Treasurer Murphree agreed to investigate the cost of an annual audit and to report at the TAS spring meeting.

Fellows Committee Chairperson Charles McGhee reported that no nominations were received by the Fellows Committee.

Long Range and Strategic Planning Committee Chairperson John Harris encouraged members of the Executive Committee to be diligent in getting information to the Director of Electronic Communication for posting. He noted that the information on standing committees posted on the website is out of date. Harris acknowledged that updating design, and constant revision of information the website is labor intensive and suggested that student workers be hired to assist. Harris recalled that there is TAS precedent for use of student assistants with appropriate approval. Chairperson Harris indicated continued work on this recommendation and will report again at the April 2008 meeting.

Education Committee Chairperson Kim Clearly Sadler was not in attendance and submitted no report.

Membership Committee Chairperson Karen Kendall Fite reported work on the next electronic newsletter to go out to the membership. This newsletter will contain information on the Visiting Scientists Program, website access, and spring Collegiate Division meetings. The Membership Committee is still working on establishing at least one TAS member contact at each of the colleges and universities in the state.

Necrology Committee Chairperson Alexander Wells submitted no names of deceased members.

Nominating Committee Chairperson John Harris presented the following slate of officers for 2008 for approval by the Executive Committee: President: Cindi Smith Walters, Middle Tennessee State University; President-elect: Gore Ervin, Middle Tennessee State University; Treasurer: Steve Murphree, Belmont University; Secretary: Teresa Fulcher, Mississippi State Technical Community College; and Managing Editor: Stephen Stedman, Tennessee Technological University. Michael Redding made a motion to accept the slate of officers presented by the Nominating Committee. Michael Daley seconded the motion and the motion carried.

Publicity and Research Committee Chairperson Mandy Carter-Lowe submitted the following report:

"Press releases were sent via email to daily newspapers, radio stations, and TV stations in Tennessee announcing the 117th annual meeting to be held at the Volunteer State Community College. In addition press releases were sent to Nashville Public Radio, WSMV-Channel 4, WTVF-Channel 5, and WKRN-Channel 2.

"Nancy Morris of Volunteer State forwarded the press release to Eric Melcher, the communications coordinator for their college. I had told her that previous searches had indicated press releases may not have been utilized by media as we had hoped. This may be due to the press releases being sent to a generic email, instead of to specific reporters who cover science and/or educational topics. Mr. Melcher felt he could not get appropriate media attention on short notice. He did offer to revise the press release and submit to his media contacts along with some photos after the meeting.

"After Mr. Melcher's reply, it has become obvious to me that we have not been tapping into an already established resource for media attention. Most schools have the equivalent of a communications coordinator/media contact. These individuals have already established contacts with specific reporters from their local media and may be more successful in getting media attention than the TAS publicity committee. I would like to recommend that the local arrangements committee establish a connection between the host college media representative and the publicity committee chair for TAS. The contact would need to occur well in advance of the meeting in order to allow sufficient time for preliminary media coverage, in addition to potential articles with pictures after the annual meeting. For meetings held in conjunction with TSTA (or other organizations) that are not conducted at a college or university, it may be wise to collaborate with their officers for additional insight into media contacts.

"To follow-up on my spring report, I have been unsuccessful in obtaining pictures from the APSU 2006 meeting."

Chairperson Carter-Lowe concluded by saying that she would like to put a request in the next issue of the electronic newsletter for copies of photos from the 2006 annual meeting.

Resolutions Committee Chairperson Sallie Noel submitted the following Resolution of Appreciation for consideration by the Executive Committee:

“Whereas, the Tennessee Academy of Science is enjoying the most pleasant, profitable, and well-organized series of meetings at Volunteer State Community College at Gallatin, and

“Whereas, the success of these meetings has resulted mainly from the efforts of the officers of the respective sections; the Local Arrangements Committee, Ms. Nancy Morris; Meeting Coordinator, Dr. J. Michael Redding; the 2007 TAS Executive Committee, composed of President, Dr. George E. Webb; President-elect and Program Chair, Dr. Cindi Smith-Walter; Past-President, Dr. John W. Harris; Secretary, Ms. Teresa Fulcher; and Treasurer, Dr. C. Stephen Murphree; and from the recognition given the meetings by the press, television, and radio stations; and from the generous hospitality of the host institution, Volunteer State Community College, and its President, Dr. Warren Nichols;

“Be it Resolved, therefore, that the Tennessee Academy of Science expresses its sincere appreciation to these and all others who contributed to the success of the meetings.”

The Resolution of Appreciation will be presented for approval and adoption by the membership of the TAS annual business meeting on 16 November 2007.

OLD BUSINESS

Local Arrangements Committee Chairperson Nancy G. Morris welcomed the members of the Executive Committee. She reported that the opening sessions would take place in the Pickel Field House. The luncheon and poster session will take place in the Rochelle Center. The technical sessions will be held in Warf and Wallace buildings. Chairperson Morris informed the Executive Committee that many State Legislators would be on the Volunteer State Campus during the meeting. Michael Redding commended the work of Nancy Morris and the Local Arrangements Committee.

President Webb presented a report prepared by Diane Vaughn of the Tennessee Science Teachers Association (TSTA) regarding the upcoming joint meeting scheduled for November 2008 at the Sheraton Music City in Nashville, Tennessee. The time and location of the Executive Committee meeting was discussed. The two options presented were meeting at Belmont University the Thursday prior to the joint meeting, or Friday morning prior to the technical sessions. President Webb agreed to check with Diane Vaughn regarding availability of space for the TAS Executive Committee meeting.

NEW BUSINESS

The University of Tennessee, Knoxville, will host the November 2009 TAS meeting. Dr. Al Hazari has suggested that the committee consider an alternate date rather than the traditional Friday prior to Thanksgiving. The recurring conflict between the Tennessee Academy of Science and the Tennessee Science Teachers Association was again noted.

A TAS member has submitted an inquiry to President Webb, Meeting Coordinator Redding, President-elect Smith-Walters, and Managing Editor Ervin regarding rules for judging student presentations at the annual meeting and adherence to the word limit for abstracts. The Executive Committee discussed possible revisions to the criteria for judging student papers, and Meeting Coordinator Michael Redding agreed to rewrite the judging criteria. Managing Editor Gore Ervin reported that the average length of abstracts is 162 words.

The status of some of the less active technical sessions was discussed. It was noted that Ethics was not meeting, and Physics and Astronomy had been combined with Chemistry, as there was only one paper in the former session. Treasurer Murphree suggested that the Executive Committee consider adding an Ecology section. It was recommended that Karen Kendall-Fite post an inquiry in the upcoming electronic newsletter to solicit input. Director of Electronic Communication Howard suggested we consult the Constitution of the Academy. His recollection is that fifteen individuals have to submit an application to the Academy to add a new section, and the application must be approved at the annual meeting.

The Executive Committee discussed potential avenues of involvement with EPSCoR. Suggestions included organizing a symposium at an annual meeting, recruiting Junior Academy or Collegiate Division members to participate in research, linking with the Visiting Scientists Program, and recruiting TAS members to participate in training. Michael Redding volunteered to put together a one-page proposal early in December to submit to President Webb. Michael Redding asked Executive Committee members to submit ideas to him as soon as possible.

Members of the Executive Committee thanked Past-President John Harris for his years of service to the Tennessee Academy of Science. Dr. Harris has served the Academy in numerous ways, including acting as Treasurer for many years.

Gore Ervin moved that the 15 November 2007 meeting of the Executive Committee of the Tennessee of Science be adjourned. President-Elect Cindy Smith-Walters seconded the motion and the motion carried. President Webb adjourned the meeting at 10:32 PM CST.