

## THE TENNESSEE JUNIOR ACADEMY OF SCIENCE

DR. JACK RHOTON, DIRECTOR

*East Tennessee State University, Johnson City, Tennessee*

The Tennessee Junior Academy of Science (TJAS), sponsored by the Tennessee Academy of Science (TAS), is one of the oldest student science competition programs in the state and nation. Since its inception in 1942 at the George Peabody College in Nashville, the TJAS objective has been to promote science education in Tennessee high schools by encouraging original scientific research by secondary school science students.

*Annual meeting and student awards*—The TJAS invites high school students from across the state to submit papers based on research problems, with evidence of creative thought to the TJAS Director by March 1 of each year. A panel of readers and judges evaluates each paper, based on a set of pre-determined criteria, and approximately twenty-five are selected. The student authors are invited to present their research to their peers during the annual TJAS meeting. The rewards for participation include the honor of being selected to appear on the program, the opportunity to present and discuss their work before an outstanding group of young scientists, and publication of the abstracts of presented papers in the *Handbook and Proceedings of the Tennessee Junior Academy of Science*. A panel of judges at the annual meeting selects the top six–nine papers and the complete papers are published in the *Handbook*. In addition, the TAS provides \$500 cash awards to the two most outstanding writers/presenters, and \$200 awards to the next five–seven students whose papers are published in the *Handbook*. The two outstanding writers/presenters also receive travel awards of up to \$500 each to attend and present their work at the American Junior Academy of Science meeting, which meets annually in conjunction with the National Association of Academies of Science.

*Research support*—The TJAS has available a number of small research grants (\$200–300 per student) to support student research for the TJAS program. The intent of these research grants is to create opportunities for motivated students with limited resources to conduct significant, competitive research projects. Each year many of these grants go unclaimed and science teachers are encouraged to make their students aware of these resources. However, there is no guarantee that all requests will be funded.

*Teacher recognition*—The TJAS and the TAS also are actively engaged in acknowledging science teacher contributions to science education in Tennessee. Each year, the TJAS recognizes three outstanding science teachers, one from each geographic region of the state. These awards recognize teachers for their outstanding contribution to science teaching and for stimulating and inspiring students to an active interest in science. The recipients are invited to attend the spring TJAS

meeting where they are recognized with presentation of a framed certificate and a \$100 honorarium.

First presented in 1997, the TAS Distinguished Secondary School Science Teacher Award recognizes one Tennessee science teacher who has made significant contributions to the teaching and learning of science. Nominees for the award are evaluated on the basis of their contributions to the teaching profession, education record, involvement in professional organizations, special awards or special recognition, and letters of support. The recipient of this award is invited to attend the fall TAS meeting where he/she is recognized with presentation of a certificate, a plaque, and a \$500 cash award.

### 2005 MEETING OF THE TJAS

*Pearl Cohn High School  
Nashville, Tennessee*

The 2005 TJAS meeting was held on Friday, April 22, 2005, at Peal Cohn High School in Nashville. A total of ninety-six students from across the state submitted papers, and a panel of readers selected twenty-five students who were invited to present their research papers at the annual meeting. A panel of judges selected two top presenters, and identified a total of nine students whose research papers were included in the 2005 *Handbook*. A copy of the *Handbook* was sent to all high school science departments in Tennessee as identified in the Tennessee State Department of Education's Directory of Public Schools, Approved Non-Public and Special State Schools. Also, all students and teachers who participated in the 2005 TJAS program received a copy of the *Handbook*.

### TJAS OUTSTANDING STUDENT AWARDS

Shaleen Cholera. Intracellular Replication and Gene Expression Pattern of *Staphylococcus aureus* and Emergence of Small Colony Variants: Intervention with Silencing of Selected Virulence (Leukotoxins—LukED, LukPV) and Genes Involved with DNA Synthesis (Gyrase A). *White Station High School, Memphis, Tennessee*

Aaron Lee. The Role of Hepsin in an in vivo *c-myc* Model of Prostate Cancer. *Martin Luther King Jr. Magnet School, Nashville, Tennessee*

### TJAS OUTSTANDING SCIENCE TEACHER AWARDS

Eastern Region—Scott Tester. Teaches middle school science. *Cloudland High School, Cloudland, Tennessee*

Middle Region—Dr. John Lee. Teaches chemistry, molecular research, and biology. *Martin Luther King Jr. Magnet School, Nashville, Tennessee*

Western Region—Stan Peppenhorst. Teaches chemistry and honors chemistry. *Germantown High School, Memphis, Tennessee*

## TJAS INFORMATION

Inquiries regarding TJAS activities should be directed to: Dr. Jack Rhoton, TJAS Director, Division of Science Education, East Tennessee State University, PO Box 70684, Johnson City, Tennessee 37614 (phone 423-439-7589 or e-mail rhotonj@etsu.edu).

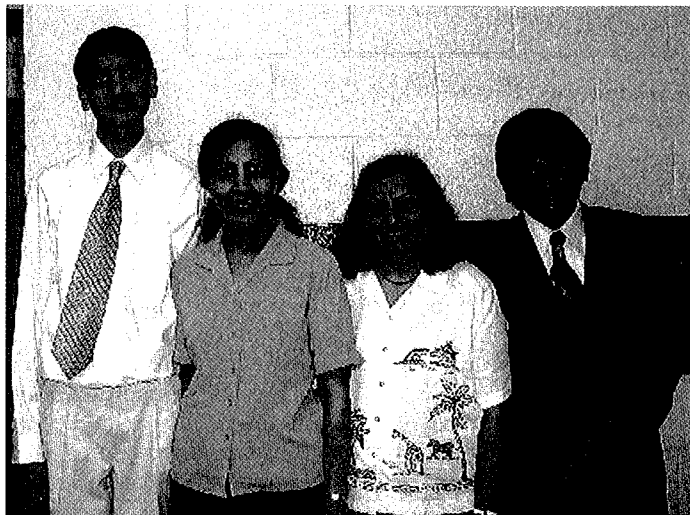


FIG. 1. Students and parents from White Station High School, Memphis who attended the 2005 TJAS Collegiate Meeting. Attendees include (left to right) Anand Baxi (presenter), Priti Baxi (mother), Shila Cholera (mother), and Shaleen Cholera (top presenter award recipient).

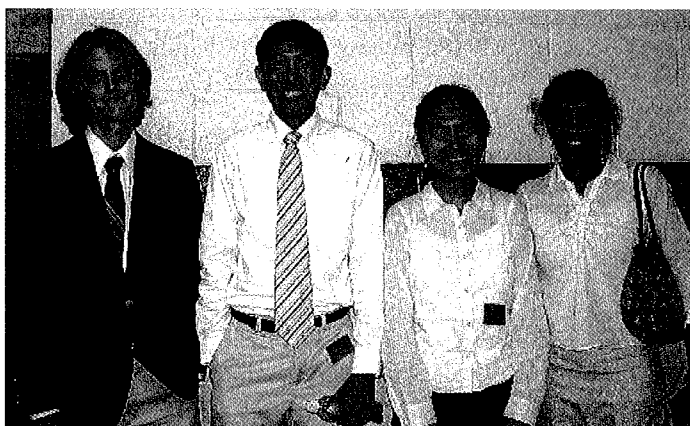


FIG. 2. Students from Martin Luther King Magnet High School, Nashville who attended and presented papers at the 2005 TJAS Collegiate Meeting. Students include (left to right) Lucas Hofmeister, Aaron Lee (top presenter award recipient), Xue Feng, and Saranya Sathananthan.

## 2005 TAS DISTINGUISHED SECONDARY SCHOOL SCIENCE TEACHER AWARD

Marion Pitts. Teaches biology, chemistry, and technology. *Westview High School, Martin, Tennessee*