



South Carolina Academy of Science

Vol. 31, No. 2

Newsletter

Summer, 2006

10.2006 SCAS Long Range
Planning Committee
USC-Columbia

12.8.2006 Governor's Award
for Excellence in
Science Awareness
Nomination Deadline

12.15.2006 Teacher of the Year
Award Nominee
Deadline

01.2007 Deadline for Abstract
Submissions
for SCAS/SCJAS
Annual Meeting

04.20.2007 Annual Meeting
Midlands Technical
College
Columbia, SC



SUMMARY OF THE SOUTH CAROLINA ACADEMY OF SCIENCE 79TH ANNUAL MEETING

The 79th Meeting of the South Carolina Academy of Science was held at the University of South Carolina, Columbia on Friday, March 10, 2006. The Senior Academy had a very successful meeting with 157 registrants and 105 presentations including 14 posters. The presentations were from nineteen different institutions across the State of South Carolina. There were nine concurrent topical sessions during the morning and afternoon sessions. There were many undergraduate presentations representing essentially all colleges and universities in South Carolina. Eight of these undergraduates received category awards and two received overall best presentation awards.

The keynote address at the Joint Session of the Senior Academy and the Junior Academy was presented by Prof. Davis Baird, a highly respected South Carolina Philosopher, the Dean of the South Carolina Honors College and the Director of the *nano*Science and Technology Studies Group in the University of South Carolina NanoCenter. His keynote speech was entitled "Images of the Nanoscale: What they say, what they suggest". His presentation was enthusiastically received by the approximately 400 attendees in the Belk Auditorium at the University of South Carolina.

During the Joint Session, several awards were presented. Christopher D. White from Seneca High School was recognized as the recipient of the South Carolina Academy Science Teacher of the Year Award (Excellence in Secondary School Science Teaching). Dr. Yusuf Hannun from the Medical University of South Carolina received the Governor's Award for Excellence in Scientific Research. Dr. Omar Bagasra and Dr. Rebecca Bullard-Dillard from Claflin University jointly received the Governor's Award for Excellence in Scientific Awareness. Dr. Karen Burg from Clemson University received the Governor's Young Scientist Award for Excellence in Scientific Research.

The Junior Academy had a very successful meeting with 200 registrants and 138 presentations. The presentations were from 10 high schools, 2 middle schools and 2 elementary schools from across the State of South Carolina. There were nine concurrent topical sessions during the morning and afternoon sessions. Seventy-six oral presentation awards and 71 research paper awards were presented at the Award's dinner in the University of South Carolina Capstone building.

(Summary of Annual Meeting continued on page 3)

Undergraduate Research Competition



The South Carolina Academy of Science (SCAS) in cooperation with the Charleston and Clemson Chapters of Sigma Xi, the American Association for the Advancement of Science, and the Explorer's Club of Columbia, SC, honored college students from around the state with awards for outstanding undergraduate research based on their presentations at the Academy's Annual Meeting on March 10, 2006 at the University of South Carolina in Columbia.

The purpose of the awards is to foster, encourage, and recognize the work done by South Carolina undergraduate students on projects of exceptional scientific merit. The awards were made by a panel of distinguished judges from industry and academia and were based on the research presented by the students.

Forty students presented research results at the Annual Meeting representing eleven South Carolina universities and colleges. Awards were made for oral presentations given in six topical sessions and one poster session. A total of seven undergraduate students were honored for outstanding undergraduate research.

In addition, the Academy also awarded the Horace Byrne Award for outstanding frontier scientific research conducted by an undergraduate student. This award is sponsored by the Explorers Club of Columbia, SC.

The American Association for the Advancement of Science sponsored awards for the outstanding male and female undergraduate science students. The recipients of the AAAS awards receive a one-year honorary membership in AAAS that includes a year's subscription to *Science* magazine.

Judges for Undergraduate Research Competition

The Academy extends its thanks and appreciation to the 2006 Annual Meeting judges who did an outstanding job of evaluating the undergraduate presentations. The judges for the 2006 Annual Meeting were:

Dr. Dwight Camper,
Clemson University

Dr. John Inman,
Presbyterian College

Dr. Val Dunham,
Coastal Carolina University

Dr. Rahina Mahtab,
South Carolina State University

Dr. Jane Ellis,
Presbyterian College

Professor Elizabeth Mayo,
South Carolina State University

Dr. Joe Emily,
South Carolina State University

Dr. Jim Privett,
University of South Carolina Sumter

Dr. Danny Faulkner,
University of South Carolina Lancaster

Dr. John Riley,
DSB Scientific Consulting

Dr. Bob Feller,
University of South Carolina Columbia;

Dr. Ron Ruszczyk,
University of South Carolina Aiken

Dr. Sharon Gilman,
Coastal Carolina University

Dr. Tyrone Toland,
University of South Carolina Upstate.

**Awards for Outstanding Undergraduate Research
Presented at the SC Academy of Science Annual Meeting
March 10, 2006
University of South Carolina Columbia**

ORAL PRESENTATIONS

Astronomy

Melissa Sims Department of Physics & Astronomy, College of Charleston
A Study of HD21071 Based on New Data

Cell & Molecular Biology

Zach Wilson Department of Biology and Geology, University of South Carolina Aiken
Characterization of the Retroviral Vector pLNPolIX

Chemistry & Biochemistry I

John Knight Department of Chemistry and Biochemistry, College of Charleston
Synthesis of Heterocyclic Compounds Using New Methodology with
Dianions of Beta-Diketones

Chemistry & Biochemistry II

Rachel Hipp Department of Chemistry and Biochemistry, University of South Carolina Columbia
Characterizations of the Chemical Composition of Latent Fingerprints by Gas Chromatography/
Mass Spectrometry

Computer Science

Brittany Smith Department of Computer Science, Furman University
Access Control on the Semantic Web

Field Biology

Melissa Warren Department of Biology and Geology and Department of Chemistry,
University of South Carolina Aiken
Chemical Analysis of Pigmented Sclerites from Diseased Coral Sea Fans

Poster Session

Michael Coggins Department of Chemistry and Biochemistry, University of South Carolina Columbia
Probing the Mechanism of Dehalogenation by C. Fumago

Horace Byrne Explorers Club Award for Outstanding Frontier Science by an Undergraduate Scientist

Melissa Sims Department of Physics & Astronomy, College of Charleston

**American Associate for the Advancement of Science Award to the Outstanding Male
and Female Undergraduate Scientists**

Michael Coggins Department of Chemistry and Biochemistry, University of South Carolina Columbia

Melissa Warren Department of Biology and Geology and Department of Chemistry,
University of South Carolina Aiken

(Summary of Annual Meeting continued from front page)

The Academy expresses sincere appreciation to the following people who helped make this meeting a success: The Dean of the USC College of Arts & Sciences, the Dean of the USC Honors College, and the Dean of the USC College of Engineering and Information Technology; the USC Office of Research; the USC NanoCenter; the chairs of the USC Departments of Chemistry & Biochemistry, Biological Sciences, Geological Sciences, Mathematics, Statistics, and Chemical Engineering, Dr. Karen Fox, who was invaluable in organizing the junior academy, Deedra Senter and Jim Twitty, from USC Events Planning, Mr. David Ferris, Ms. Kenley Farmer and Ms. Katherine Wright, and the many other individuals who contributed to the success of the Meeting -- their efforts are appreciated.

Recipients of the 2006 Governor's Awards for Excellence in Science



Governor's Award winners (left to right): Dr. Yusuf Hannun, Dr. Rebecca Bullard-Dillard, Dr. Karen Burg, and Dr. Omar Bagasra.

The winners of the 2006 Governor's Award for Excellence in Science were announced at the SC Academy of Science's Annual Meeting March 10th, 2006. They are Dr. Yusuf Hannun, of the Medical University of South Carolina for Excellence in Scientific Research; Dr. Rebecca Bullard-Dillard of Claflin University for Excellence in Scientific Awareness; Dr. Karen Burg of Clemson University for Young Scientist Award for Excellence in Scientific Research; and Dr. Omar Bagasra from Claflin University for Excellence in Scientific Awareness.

The award was established in 1985 by the Drug Science Foundation to honor specifically an individual or team within the state whose achievements and contributions to science in South Carolina merit special recognition and to promote wider awareness of the quality and extent of scientific activity

in South Carolina. Since 1989 the award, named the "Governor's Award for Excellence in Science", has been under the joint sponsorship of the Governor's office and the South Carolina Academy of Science. In 1993 these groups were joined by the Dewees Development Corporation and Harbor Watch of Charleston. In 2000 **Roche Carolina Inc.** took the lead, in 2004 **MeadWestvaco** joined and in 2005 **Michelin North America** joined in sponsorship of the Governor's Awards.

Dr. Don Jordan, professor at USC-Columbia chairs the committee who selected this year's winners. He can be reached at (803) 777-7007 or email: Jordan @gwm.sc.edu.

The 2006 Governor's Award for Excellence in Scientific Research is awarded to Dr. Yusuf Hannun of the Medical University of South Carolina.

Dr. Yusuf Hannun grew up in Beirut, Lebanon where he obtained his M.D. degree with distinction from the American University of Beirut. There he served an internship and residency in internal medicine before going to Duke University for sub-specialty training in Hematology and Medical Oncology. At Duke, he also worked in the laboratory under the guidance of Robert Bell, PhD, a highly respected lipid biochemist. In the laboratory, Dr. Hannun developed his interest in cellular signal transduction and the unexpected role of lipids in cell signaling. Following his training, Dr. Hannun joined the faculty of the Department of Medicine at Duke where he rose through the ranks, becoming Professor of Medicine. He also received an endowed chair at Duke, the Wayne Rundles Chair in Medical Oncology. At Duke, he also served as Director of the Program in Molecular Medicine and as Associate Director of the Duke Comprehensive Cancer Center. In his independent career at Duke, Dr. Hannun focused on the emerging roles of lipids in cell regulation. His work led to remarkable discoveries on a class of lipids known as sphingolipids.

Sphingolipids are a class of fatty molecules that have long defied investigation; their very name derives from the Greek Sphynx because they presented their discoverer Thudicum(1888) with an enigma that has persisted for nearly a century. Dr. Hannun's work has relentlessly and progressively deciphered this enigma. His studies led to the discovery of the novel

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class of bioactive sphingolipids; indeed, the field was launched with his initial discovery of biochemical and biological activities of the molecule sphingosine. His group went on to describe, for the first time, the sphingomyelin cycle and the bioactive lipid ceramide. Early on, Dr. Hannun proposed roles for ceramide as a key regulator of how cells respond to stress signals, especially its roles in regulating cell death; a concept that is now firmly established through multiple genetic, biochemical, and pharmacologic studies ranging from yeast to human. In addition, Dr. Hannun and his group have consistently advanced the biochemical and molecular foundations of this field, which, until his studies, had lagged behind other areas of basic biological research. Importantly, these sphingolipid pathways are increasingly appreciated to play key roles in human disease including aging, neurodegeneration, angiogenesis, inflammation and cancer, and, consequently, they have become the targets of novel therapeutics for inflammation, immune suppression, and cancer. His work has been of fundamental significance in changing our thinking of lipids from inert membrane molecules to an intricate network of molecules that regulate important cellular functions.

Dr. Hannun has published extensively in highly prestigious journals. He has more than 320 publications, and has edited 6 books and authored 6 patents. He has been continuously funded from the National Institutes of Health for over 20 years. Dr. Hannun is married to Lina Marie Obied, M.D., another highly productive investigator, nationally known for her work on cell aging. The couple have three children (triplets) age 18.

The 2006 Governor's Award for Excellence in Scientific Awareness is awarded to Dr. Omar Bagasra of Claflin University.

In 1948, somewhere on the plains of India, Omar Bagasra was born in the back of a wooden oxcart. His refugee family was migrating north during the exodus of the twenty-five million souls who were forced to leave their ancestral homelands when the former British colony of India was being partitioned during its struggle to become independent. At least eight million of these refugees—Sikhs, Muslims, and Hindus alike—perished in this partitioning. Omar's family settled in the new nation of Pakistan, where his father became a successful grain merchant and where ten more brothers and sisters were born and one was adopted. In this somewhat volatile environment, Omar grew into a young man.

Dr. Bagasra currently serves as Professor of Biology and the director of the South Carolina Center for Biotechnology at Claflin University in Orangeburg, SC. Omar earned a bachelor and a master's degree in biochemistry from University of Karachi, in Pakistan. In 1972, he flew to Chicago's O'Hare airport—carrying just a suitcase of clothing and an extra hundred dollars in his pocket. Omar saved his wages and in 1976 he enrolled at the University of Louisville as a full time graduate student and doctoral candidate. By 1980, Omar had earned a Ph.D. in microbiology and immunology. Soon thereafter, Omar decided to go to medical school. and went to study medicine at the Universidad Autónoma in Ciudad Juarez, Mexico. After two years of study, he went to Temple University, where he completed his clinical training as well as resumed his position at Hahnemann as Assistant Professor in the Department of Pathology.

Omar's research interests have long been associated with the study of HIV and AIDS. Dr. Bagasra's current research interests included: i) role of zinc transporters in the molecular pathogenesis of prostate cancer and diabetes, ii) development of molecular vaccine against HIV-1 iii) and role of endogenous retroviruses in the maintenance of placenta.

Omar didn't know anyone in the U.S., but he soon found employment in the road construction industry and he learned to speak better English—his seventh language. He then got a better job manufacturing brake shoes for the Ford Motor Company in Albion, Indiana, near Ft. Wayne. In those days the scholarships for the foreign students were scarce. Therefore, Omar worked as a lab tech at the nearby Clark County Memorial Hospital in Jeffersonville, Indiana. There he met a young nurse, Theresa Mahoney, and the two were married. He joined a group in Albany, NY to do his post-doctoral fellowship in Infectious Disease and the family moved to Philadelphia, when his post-doc mentor moved to the city, where Omar became a junior faculty member at Hahnemann University (instructor) and a citizen of the United States of America. But admissions policies at that time were very restrictive for individuals born and educated overseas and the tuition was more than he can afford, so the 32-year-old Omar—never one to be confined by national borders—and Laboratory Medicine.

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During his stay at Hahnemann, he served on the faculty as well worked as a Pathology Resident. After a total of eight years at Hahnemann, Omar moved to UMDNJ for a short time. Then, he moved to Thomas Jefferson University in Philadelphia, where he served as Director of the Molecular Retrovirology Laboratories and Section Chief of Molecular Diagnostics of the Center for the Study of Human Viruses, as well as a Professor of Medicine. Omar continues to keep his hands in clinical work—he is currently board-eligible in anatomic pathology and a Diplomat of the American Board of Medical Laboratory Immunology. In fact, he has been on the trail of the virus since 1981—the year of the first scientific report. For the past several years, Omar has focused on trying to gain insight into the molecular pathogenesis of HIV. His unswerving dedication to his work has resulted in over 150 scientific articles, book chapters, and books.

The 2006 Governor’s Young Science Award for Excellence in Scientific Research is awarded to Dr. Karen Burg of Clemson University

Karen J.L. Burg and spouse Timothy C. Burg, both alumni of Clemson University, elected to remain in the Southeast in order to give back to the area that launched their careers. As products of the region, they recognize the important role of higher education in South Carolina. They are humbled by the leadership role and responsibility of universities in economic and social development and have attempted to build their research and education programs to meet these high expectations. Personally, they are also thankful for the role that the State of South Carolina has played in encouraging, financing and promoting their faculty careers at Clemson University.

A native of Chapel Hill, North Carolina, Karen began her undergraduate studies as a chemical engineer, earning a B.S. in Chemical Engineering from North Carolina State University (Raleigh, North Carolina) in 1990. She identified this educational training as a perfect springboard to biomedical implant design. While considering graduate engineering programs she was attracted to Clemson University, being impressed by Clemson’s pioneering role in the field of biomaterials as well as the friendly campus environment. Karen’s graduate work was directed by Dr. Shalaby Shalaby, an internationally recognized South Carolina entrepreneur and inventor of many commercially available sutures and related biomedical devices. Under his direction at Clemson, she learned about the field of absorbable materials, i.e., materials that are designed to degrade after implantation in the body. Karen completed an M.S. in Bioengineering in 1992 and a Ph.D. in Bioengineering in 1996 and published six papers from her graduate work. During graduate school discussions with surgeons at Carolinas Medical Center (CMC) in Charlotte, North Carolina, Dr. Burg discovered a biology-centric environment that was ripe for biomaterials and engineering research. She accepted a postdoctoral fellowship at CMC and was intrigued by the possibility of designing cell based materials that could be implanted in a breast cancer patient following a lumpectomy in order to provide a biological repair to the damage caused by the disease and the surgery. The medical center environment was tremendous and allowed her an opportunity to interact with individuals with a wide variety of technical backgrounds. She acquired National Science Foundation funding during this time and completed her tissue engineering postdoctoral fellowship at CMC in 1999 having filed three patent applications.

In considering job opportunities around the country, the same appeal that drew Dr. Burg to Clemson, South Carolina as a graduate student attracted her to Clemson University as a faculty member. She joined the faculty at Clemson University as Assistant Professor of Bioengineering in 1999 and established an absorbable materials research program with application to multiple disease states including orthopedic and soft tissue reconstruction application. She has authored over 60 peer reviewed publications on the subject of absorbable biomaterials and/or tissue engineering and is currently the co-editor of a CRC press book series entitled “Advances in Polymeric Biomaterials”. Dr. Burg has given over 160 invited presentations, including multiple invited presentations at Gordon Research Conferences and National Academies meetings, she has authored over 60 peer reviewed publications pertaining to injectable tissue engineered systems, and she is the inventor listed on three patents and five patent applications.

Karen enjoys facilitating the professional and technical development of graduate and undergraduate students and attributes her research program’s successes to their enthusiasm and intellectual capabilities. Karen has capitalized on Clemson University’s endorsement of service learning by involving her students in community outreach activities. She recognizes the

importance of conveying biomedical concepts to the public and involving the public in the research and education process. Her students have developed and given over fifty interactive overviews of biomedical technologies to K-12 students and educators, both regionally and nationally, and have developed numerous educational modules that have been embedded into science curricula nationally. Dr. Burg has served as the primary academic and research advisor to 14 Clemson Bioengineering Ph.D. and M.S. graduates; she currently serves as the primary advisor to 15 graduate students.

The 2006 Governor's Award for Excellence in Scientific Awareness is awarded to Dr. Karen Burg of Clemson University.

Dr. Rebecca Bullard-Dillard was born in Alabama but raised and educated from age ten in the Greater Columbia Metropolitan area. She earned her B.S. degree in Biochemistry at North Carolina State University in 1990 and was named Outstanding Biochemistry Student of the Year for that graduating class. During her undergraduate career, she was employed as a research assistant and competed with graduate-level applicants for a summer research fellowship and won the award from the Lupus Foundation of America. Her resulting work produced data that was presented at one state-level meeting and at two national research meetings and was published a peer reviewed journal. She was accepted to a Ph.D. degree program at the University of South Carolina, Department of Chemistry and completed that degree in 1996. She joined the faculty of Claflin University as an Assistant Professor of Biology in the fall of the 1996/97 academic year. In her time there she has had a profound influence on the culture of the institution.

Over the past ten years at Claflin University, Dr. Bullard-Dillard has engaged in an unflagging campaign to bring research activities and research resources to our campus so that faculty and students might participate more fully in the scientific enterprise of the state. She is a deeply committed and vocal proponent of the need to increase the participation of underrepresented groups as contributing scientists. Her dedication to increasing the number of minority researchers and scientist for the state and nation has been acknowledged through her past membership on the Diversity Advisory Board for the Medical University of South Carolina's School of Allied Health Professions and through the honor of having her name placed on the Southern Poverty Law Center's Wall of Tolerance Memorial in Montgomery Alabama.

During her time at Claflin University Dr. Bullard-Dillard has been twice nominated and has once been awarded the James E. Hunter Faculty Excellence award. She was chosen as the university's nominee for the Governor's Professor of the Year award in 2002 and 2003. She was also nominated for the Governor's Award for Excellence in Scientific Awareness in 2004 and she has been named to Who's Who among College and University Teachers in five different years.

Due to her own experiences as an undergraduate researcher, Dr. Bullard-Dillard is a vocal proponent for the use of research as a means of teaching science to budding scientist. In the fall of 1999 she was asked to serve as the Chair for the Department of Biology and still serves in that capacity. In addition, she was asked to train in Research and Grants Administration in the spring of that year and completed a 40 hour course in Sponsored Programs management taught through the U.S. Department of Health and Human Services' Office of Minority Health. In 2000, Dr. Bullard-Dillard won an Extramural Associates Research Development Award from the National Institutes of Health and was employed as an Extramural Associate during the summer of 2000. As a result of the activities funded via that grant, Dr. Bullard-Dillard was appointed to the position of Director of Research Development for Claflin University.

Dr. Bullard-Dillard's efforts to build research capacity in the sciences at Claflin have led to several grant funded agreements with researchers at Clemson, MUSC and the University of South Carolina. She has been Principal Investigator (PI), Co-PI or has assisted in the authoring of grant awards to the institution of over \$12,000,000 in the past 5 years. Dr. Bullard-Dillard is a currently a member of the Board of Directors for the Palmetto Biotechnology Alliance and a member of the Steering Committee for the South Carolina IDeA Networks of Research Infrastructure Excellence. Rebecca is the youngest of four siblings. She has been married to Ted Dillard of Yadkinville, North Carolina for the past 23 years. They currently reside in Orangeburg, South Carolina. She often jokes that, although she has no biological children of her own, she is a surrogate mother to over 200 students a year at Claflin University.

Call for Nominations for the 2007 Governor's Award for Excellence in Science

The award was established in 1985 by the Drug Science Foundation to honor specifically an individual or team within the state whose achievements and contributions to science in South Carolina merit special recognition and to promote wider awareness of the quality and extent of scientific activity in South Carolina. Since 1989 the award, named the "Governor's Award for Excellence in Science", has been under the joint sponsorship of the Governor's office and the South Carolina Academy of Science. In 1993 these groups were joined by the Dewees Development Corporation and Harbor Watch of Charleston. In 2000 **Roche Carolina Inc.** took the lead, in 2004 **MeadWestvaco** joined and in 2005 **Michelin North America** joined in sponsorship of the Governor's Awards.

Beginning in 1990, two of these awards were given annually with one being for scientific discovery and the other for scientific awareness. In 2005 the Academy, in conjunction with the Governor's Office, initiated the sponsorship of a third award directed to a gifted young researcher (*only those individuals who have completed no more than 12 years beyond the Ph.D.*). The award is called the Governor's Young Scientist Award for Excellence in Scientific Research and was sponsored by Michelin North America. The awards consist of an honorarium of \$1,000 and a handsomely framed certificate which is presented to the recipient at a special awards ceremony held in the spring in conjunction with the South Carolina Academy of Science's annual meeting.

Candidates should be currently working in South Carolina or have conducted a substantial portion of their work within the state. Contributions may be in any area of science and may be for service to science through non-formal education in the various media, for exemplary exposition at the college or university level, or as an acknowledgement for significant outstanding formal research. The award may be given to an individual or a team. If the award is made to a team, the honorarium will be distributed equally.

Please send your nomination to the Chair of the Governor's Award Committee, Dr. Don Jordan of the USC College of Arts and Sciences, Columbia, SC. Give complete address as well as email information.

Deadline for receipt of nominations is **December 8, 2006**. An official nomination form is included with this letter. Additional forms may be photocopied or obtained by request. The 2007 nomination forms and a list of past winners can be found at www.scacadsci.org under Awards.

Send your nominations to:

Dr. Don M. Jordan
Center for Science Education
College of Arts and Sciences
Sumwalt Room 323
University of South Carolina
Columbia SC 29208
Email: Jordan@gwm.sc.edu

Nomination Form

The 2007 Governor's Award for Excellence in Science

On the web: www.cosm.sc.edu/jordan click Governor's Award. This will link to scacadsci.org page about the Governor's award. All forms can be obtained at this site.

ALL NOMINATIONS MUST BE RECEIVED BY **DECEMBER 8, 2006**.

NAME, TITLE, ADDRESS, EMAIL, AND TELEPHONE NUMBER OF PERSON NOMINATED:

NAMES OF OTHER MEMBERS, IF A TEAM IS TO BE CONSIDERED:

PLEASE PROVIDE THE FOLLOWING INFORMATION: (forms should be mailed to the above address)

No more than six typed pages are to be used for the nomination (items 1-3, below). This material, and the letters of recommendation, will be distributed to the Selection Committee at least two weeks prior to the meeting.

1. A case statement summarizing the achievements on which the nomination is based, specifying the significance of particular contributions to the field of science and to South Carolina. If the nomination is made for the award for Scientific Awareness, be sure to emphasize the candidate's contribution to all educational aspects of science in South Carolina.
2. A biographical sketch of the nominee, including positions held, grants, honors and awards received.
3. A list of the nominee's most significant publications or patents.
4. Supporting references: Name, title, address and telephone number of at least two professional colleagues outside the institution or company of the nominee who have agreed to provide letters of recommendation in support of the nomination. Letters of recommendation should be solicited by the person making the nomination. They can be sent directly to Dr. Don M. Jordan by mail, fax or e-mail.

Supporting exhibits (such as full-size CV, copies of relevant publications, books, or other material) may also be submitted and will be available to the Selection Committee a few hours prior to the selection meeting. Please use the regular mail for all supporting material. We will have to duplicate materials for the committee of 10.

Name, Title, Address, Telephone Number, and Email of Person Making the Nomination:

Winners will need to be present at the SC Academy of Science Annual Meeting at Midlands Technical College on **April 13, 2007**. In addition, winners will need to meet with the Governor at a later date in the spring or early summer for the official presentation by the Governor.

The Governor's Award Committee will meet tentatively on Friday, January 26, 2007.

UNIVERSITY OF SOUTH CAROLINA
REGION II SCIENCE & ENGINEERING FAIR

for Calhoun, Clarendon, Fairfield, Kershaw, Lexington, Newberry, Orangeburg, Richland, and Sumter counties.

By Dr. Don M. Jordan, Director

The University of South Carolina hosted the Central South Carolina Region II Science & Engineering Fair on March 31, 2006. Students from nine counties (listed above) competed for over \$30,000.00 in scholarships, savings bonds, and trip awards.

Seven hundred and six (706) students and one hundred fifty-three (153) teachers participated in the fair, which included 77 Schools, (62 Middle / Elementary Schools and 15 high schools). The students were selected by over Two Hundred and fifty (250) judges comprised of College Professors, Medical Scientists, U.S. Army, Marine, and Air Force Officers, as well as Business Leaders from the Midlands Community. Awards were available in 52 major categories, such as Engineering, Women in Science, Vision Science, Chemistry, etc. Most awards had Junior, Senior, and Team subcategories, often with 1st, 2nd, 3rd and Honorary Mention standings awarded. There were a total of 197 awards given among those varied categories and standings. Students with very good projects had a possibility of winning awards in one or more categories. There were best overall standings for grades 5-12, as well as for best individual Junior Division, Senior Division and Team Division projects.

Participation in science fairs on the local, regional, and national/international levels presents opportunities to students for travel and interaction with scientists from both academic and industrial backgrounds. The next level of competition is at the **International Science and Engineering Fair (ISEF)**, which is held annually and features the best regional/national student projects from around the world. Our regional judges selected six students and three teachers to be in the Official Party to represent South Carolina at ISEF in Indianapolis, Indiana, May 7-13, 2006.

The **University of South Carolina**, with support from the **South Carolina Academy of Science**, sent the following students to **ISEF**: Grand Prize Team Senior Division winners, **Minru Wong and Abigail Khusf** of Dreher High School, Grand Prize Female Senior Division winner **Gina Noh** and Grand Prize Male Senior Division winner **Graham Van Shaik** of Spring Valley High School. Students to be sent as official observers are **James Cunningham** of Spring Valley High School and **Kristen McLaurin** of Dent Middle School. USC will send **Lisa McAlpine** and **Dale Soblo** of Spring Valley High School to lead the official ISEF party for the State of South Carolina. In addition, **Judith Ray & David Nelson** of Dreher High School will be teacher leaders and mentors for the USC Region II. The above six students will be representing South Carolina at the International Science and Engineering Fair May 7 – 13, 2006 at Indianapolis, Indiana. A report on their success will be added to this summary. In addition, students **Asif Khan and John Hodge** of Spring Valley High School, **Emily Nellermoe and Katherine Anne Colburn** of Spring Valley High School won Male and Female 2nd & 3rd place winners.

Last year at Intel ISEF (2005), **Patrick Hankins** placed third in the Chemistry Division at the international fair. To win, he had to endure nine hours of judging in which he spoke to approximately fifteen judges and then an additional four hours of presentation to the general public. Placing third in a fair of this magnitude is a huge accomplishment for the high school senior since he had to compete with 96 other competitors in his region which includes not only the best of the US, but also Germany, Brazil, Japan and other countries. His project was titled, “pH-Triggered Assembly of Gold Nanorods,” and dealt with a major problem of current nanoscience research in trying to control how nanoparticles orient themselves in varying conditions. He conducted the bulk of his research at the University of South Carolina under Dr. Catherine Murphy. His school sponsor was Irmo Science Team coach Mr. Stephen Orr. Patrick will be enrolling in the Honors College of the University of South Carolina this fall as a Carolina Scholar.

DISCOVERY CHANNEL YOUNG SCIENCE CHALLENGE / HISTORICAL CHANGES/

We have worked hard in the past seven years to strengthen the USC Central South Carolina Science & Engineering Fair. We made it possible for sixth graders to become eligible for the Region II Science & Engineering Fair in 1996. We re-introduced Team Projects in 1997 - the first time in four decades for Region II! In 1999, we lowered the grade limit to

enable fifth-grade students in the nine-county region to become eligible. We did this because Science Service of Washington, D.C. had contracted with Discovery Channel Inc., to create what has become essentially the ISEF for students in grades 5-8 (ISEF is restricted to grades 9-12). We nominated 60 middle school students to compete in DYSC in 2006. DYSC nominees receive national recognition from Science Service that includes an honor certificate, a DYSC T-shirt, a lapel pin recognizing their achievement and an entry form to compete with 6,000 other students at the international level.

Last year (2005) Eleven (11) Students Seven (7) from the Midlands were chosen by the Discovery Channel Young Scientist Challenge (DCYSC) as semifinalist (400 nation-wide). These students have the knowledge, enthusiasm and imagination to become the scientific trailblazers of tomorrow," said Judith A. McHale, President and CEO, Discovery Communications. The breadth and knowledge demonstrated by the 400 semifinalist is inspiring and sets an example for anyone with wants to explore the world around them. The eleven semifinalist from the State of South Carolina are: Emily Ann Eisenstadt (Grade 8) Crayton Middle School, Teacher: Vicki Brown; Spencer Bennett Skelley (grade 7) Crossroads Middle School Teacher: Linda Durstine; Trevor Warren Auman (grade 8), Teacher: Susan Yelton; Chandler Matthew Barton (grade 8) Teacher: Susan Yelton, and Rachitha Rajan (grade 8) Teacher: Susan Yelton all from Dent Middle School; Velina Roumenova Kozareva (grade 5) Harbison West Elementary School Teacher: Angel Norris; Grace Carroll Zimmermann (grade 5) St. Joseph School Teacher: Frances Goodrich (All Seven From Region II) Others in South Carolina are: Erika Lynn Mino (grade 5) Pelham Road Elementary School Anne Virginia Cai (grade 7) Porter-Gaud School; Seth Gaston Shelton (grade 8) D. R. Hill Middle School, and Brandon N. Baker (grade 7) McCants Middle School

USC Region II Winners of Grand Awards Junior Division

Destry Jones (Crayton Middle School, Sponsor **Andrea Karaffa**) research project entitled *Mutations: They Don't Always Add Up*, won **First Place**. **Arjun Aggarwal**, (Lexington Middle School, Sponsor **Preveen Aggarwal**) research project entitled *Can the Concept of Stereo Vision Be Applied in Robotics?*, won **Second Place**. **Kristen McLaurin** (Dent Middle School, Sponsor **Susan Yelton**) project entitled *Measuring Memory: A study of Brain Dominance and Memory*. Also there were seven Honorable Mentions for best Junior Division Best Project. In addition out of over 500 junior division participants from nine counties. The above three grand awards winners join fifty five (60) additional students that will represent South Carolina in the **Discovery Channel Young Science Challenge (DCYSC)** during the summer of 2006.

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USC Science & Engineering Fair tours for Science Fair Students

The University of South Carolina sponsored five active and hands-on tours on March 31, 2006 for High School Students and Middle School Students who advanced to the USC Region II Science & Engineering Fair. The tours were scheduled between 12:30 PM to 5:30 PM on the afternoon of March 31, 2006.

Tour # 1: Geographic Information Systems (GIS): Tour Hosted by the U.S.C. College of Liberal Arts / Dept of Geography presented by Kevin Remington, GIS Coordinator.

Tour # 2: USC School of Medicine: *Careers in the Health Professions*, Richard A. Hoppmann, M. D. Associate Dean for Medical Education and Academic Affairs. *Pathology/Plastinated Human Specimens* Tim Sullivan, Ph.D. Department of Pathology and Microbiology.

Tour # 3: Electron Microscopy Center: Hosted by Dana G. Dunkelberger. The Electron Microscopy Center is the university system's centralized analytical microscopy and imaging center. Our world class facility has over \$3 million worth of state-of-the-art instrumentation capable of analyzing the structure and elemental composition of materials. The tour included a demonstration and discussion of the capabilities of our Room-size transmission and scanning electron microscopes.

Tour # 4: Super Conductivity and Magnetism, Low Temperature Laboratory: Sponsored by the College of Arts & Science: Hosted by Dr. David Tedeschi of the Physics Department. This tour featured demonstrations and activities in low temperature physics and magnetism for all grade levels. The astronomy center showcased the use of computers for research and teaching. In addition, the astronomy center made a telescope available for public solar viewing.

Tour # 5: College of Engineering & Information Technology: *Mini Baja Dune Buggy Demonstration* Hosted by Susan Jarvie, Department of Mechanical Engineering. *Robotics* presented by Department of Electrical Engineering.

2006 MESAS MAIL-IN CONTEST

SETS ANOTHER RECORD NUMBER OF ENTRIES: 717

Winners Announced May 2006

By Dr. Don M. Jordan, MESAS State Director

The State-wide MESAS mail-in contest was held this winter & spring. There were a record number 717 entries, with 482 students from grades 4-6 and 235 students from grades 6-8. This year, the contests proved to be especially challenging and covered a broad range of topics with emphasis on Biology. We are grateful to Francis Marion University for the creation of this year's contest. The authors of the 2006 contest are faculty and staff from Francis Marion University. They are: Dr. David Stroup – 2004 Governor's Award winner for Excellence in Science, Dr. Tom Roop – 1998 Service Award Winner, Dr. Larry McCumber – 1992 Governor's Award winner for Excellence in Science, Dr. Tim Shannon – Assistant Professor of Biology, and Mrs. Angela Cantey – Administrative Assistant of Biology.

Awards were given in four categories; Grand, State, Regional and School Winners. A unique feature of the contest is that every school that participates is guaranteed at least one winner. The Grand Prizes went to 12 students from three regions who submitted the best overall papers. **Region I:** Whitney Sanders, Jr. of Grace Academy, Jessica Moore of Holly Springs Elementary, and Kelsey McNeel of Fork Shoals School, **Region II:** Afia Kahn of EL Wright, Abigail Tolar of LB Nelson Elementary, Mac Ellen of Brennen Elementary, Alyssa Broeker of Edisto Elementary, and Jonathan and Benjamin Bartlett of Renaissance Academy; **Region V:** Brittany Elek and Jessica Ford of Rollings Middle School, and Grace Westbury of Dorchester Academy. The above students are this year's Grand Prize Winners. Congratulations!

The contest scores were very good overall and a large percentage of the entrants qualified for an award. We had 161 winners out of 717 participants (approx 23% of the total number of participants were winners). Certificates and prizes were mailed out to each student's principal so that the awards could be presented at each school's Awards Assembly. We congratulate each and every contestant for his or her fine efforts! We encourage every student in all South Carolina schools to participate next year. Below is a list of the winners, their prize, as well as their sponsor and school information:

Grade	Winner	\$Amt	SCHOOL	Reg	Grade	Winner	\$Amt	SCHOOL	Reg
GRAND PRIZE WINNERS									
6	Jessica Ford	\$100	Rollings Middle School	V	6	Elizabeth Nichols	\$50	Mid-Carolina Middle School	II
6	Afia Khan	\$100	E.L. Wright	II	6	Elizabeth Glenn	\$50	Bamberg-Erhardt Middle School	I
5	Abigail Tolar	\$100	LB Nelson Elementary	II	4	Aaron Cleland	\$50	Varnville Elementary School	VII
4	Mac Ellen	\$100	Brennen Elementary School	II	4	Kenny Vaughn	\$50	Hartness Thornwell Elementary	I
5	Jessica Moore	\$100	Holly Springs Elementary	I	6	Thomas Orr	\$50	Philson Academy	I
5	Grace Westbury	\$100	Dorchester Academy	V	7	Joseph Zinna	\$50	Cornish Academy Homeschool	II
4	Alyssa Broeker	\$100	Edisto Elementary School	II	8	David Halligan	\$50	Camden Middle School	II
4	Kelsey McNeel	\$100	Fork Shoals School	I	8	Julie Beeks	\$50	Branchville High School	II
4	Jonathan Bartlett	\$100	Renaissance Academy	II	7	Jessica Kohl	\$50	Kohl Discovery School	V
5	Benjamin Bartlett	\$100	Renaissance Academy	II	8	Rebecca Evans	\$50	Dixie High School	I
7	Brittany Elek	\$100	Rollings Middle School	V	8	Alice Chang	\$50	Rollings Middle School	V
6	Whitney Sanders, Jr.	\$100	Grace Academy	I	8	Coles Lawton	\$50	Heathwood Hall	II
STATE PRIZE WINNERS									
5	Laverne Page, Jr.	\$75	Palmetto Middle/Elementary	IV	6	Trent Bannister	\$50	Belton Middle School	I
5	Adam Lipsitz	\$75	Mossy Oaks Elementary	VII	6	Donovan MacPherson	\$50	Montessori School of Florence	IV
5	Jeremy Wu	\$75	The Wu Family Homeschool	II	SCHOOL PRIZE WINNERS				
5	Cassidy Smith	\$75	Lockett Elementary School	II	6	Kaitlin Kunkle	\$25	Mid-Carolina Middle School	II
6	John Isenhower	\$75	Cambridge Academy	I	6	Drew Ricard	\$25	Mid-Carolina Middle School	II
7	Anna Brenner	\$75	Mid-Carolina Middle School	II	6	Amy Chang	\$25	Rollings Middle School	V
8	Jessica Chapman	\$75	Westview Middle School	V	4	Jacob Stockman	\$25	Cambridge Academy	I
6	Sean Bell	\$75	Gregg Middle School	V	4	Savannah Lanford	\$25	Cambridge Academy	I
7	Mary Adams	\$75	Cambridge Academy	I	4	Courtney Hayes	\$25	McCormick Elementary School	IV
REGIONAL PRIZE WINNERS									
4	Michael Whitney	\$50	Estill Elementary School	VII	3	Caleb Smoak	\$25	Edisto Elementary School	II
5	Matthew Hunter	\$50	St. Andrew's School of Math/Sci.	V	4	Katie Laken-Weeks	\$25	Fork Shoals Elementary School	I
5	Joseph Wade	\$50	Sangaree Intermediate School	V	4	Brandon Young	\$25	McCormick Elementary School	IV
5	Will Green	\$50	Clinton Elementary School	I	4	Gashon Garane	\$25	Brennen Elementary School	II
?	Kristopher Morris	\$50	Richard Carroll Elementary	II	6	Morgan Godines	\$25	Godines Academy	II
5	Dallas Porter	\$50	Faith Baptist School	I	6	Kyle Zoller	\$25	Rollings Middle School	V
5	Blake Little	\$50	Richard Winn Academy	II	4	Carly Majors	\$25	Crestview Elementary School	I
5	Kelly Elliott	\$50	Palmetto Middle/Elementary	IV	3	Dixie McCollum	\$25	Edisto Elementary School	II
6	Connor Hoffman	\$50	Heathwood Hall	II	4	Dillon Porter	\$25	Faith Baptist School	I
4	Jeremy Odom	\$50	McCormick Elementary School	IV	4	Sarah Coleman	\$25	Richard Winn Academy	II
5	Elisabeth Orr	\$50	Philson Academy	I	5	Kayla Hess	\$25	Crestview Elementary School	I
5	Daniel Johnson	\$50	Ruby Elementary School	IV	5	Courtlin Myers	\$25	Richard Winn Academy	II
5	Richard Weeks	\$50	Lonnie B. Nelson Elementary	II	4	Levi Davis	\$25	Richard Winn Academy	II
6	Tori Richey	\$50	Belton Middle School	I	6	Rebekah Todd	\$25	Diamond Hill Elementary School	I
6	Arjun Aggarwal	\$50	Lexington Middle School	II	6	Jukayla Johnson	\$25	Gibbes Middle School	II
5	Thomas Jones	\$50	Seton Homeschool	II	3	Layla Phillips	\$25	Edisto Elementary School	II
5	Ashani Ranwala	\$50	Beech Hill Elementary School	V	5	Daria Light	\$25	Light Homeschool	V
					6	Andrew Anderson	\$25	St. Joseph's Catholic School	I
					5	Meronda Murdaugh	\$25	Richard Carroll Elementary	II
					3	Taylor Proctor	\$25	Edisto Elementary School	II

Grade	Winner	\$ Amt	SCHOOL	Reg	Grade	Winner	\$ Amt	SCHOOL	Reg
SCHOOL PRIZE WINNERS									
4	Morgan Werts	\$25	Pomaria Garmany Elementary	II	6	Curtis Simmons	\$25	Greeleyville Elementary School	II
5	Meghana Roo	\$25	Montessori School of Florence	IV	4	Taylor Hunter	\$25	Sheridan Elementary School	II
6	Sarah Parks	\$25	Diamond Hill Elementary	I	4	Cassidy Bryant	\$25	Dacusville Elementary School	I
4	Jed Gist	\$25	Round Top Elementary School	II	5	James Tavelle	\$25	Macedonia Middle School	V
5	Kendrick Brown	\$25	Richard Carroll Elementary	II	6	Jonathan Friedman	\$25	Hammond School	II
6	Sheldon Turner	\$25	Gibbes Middle School	II	6	Emily Wasserman	\$25	Hammond School	II
4	Palmer Reynolds	\$25	Round Top Elementary School	II	5	Kirsten Pippin	\$25	Homewood Elementary School	IV
5	Sarah Williams	\$25	Richard Carroll Elementary	II	4	Brittany Evans	\$25	Family Christian Academy	V
6	Severin Beckwith	\$25	Greer Middle School	I	5	Andrew Montalbano	\$25	SRI	V
6	Miles Whaley-Ashford	\$25	Gibbes Middle School	II	5	Megan Slimmer	\$25	Pinecrest Elementary School	I
4	Savannah Clark	\$25	Sedgefield Intermediate School	V	8	Chelsea Ford	\$25	Rollings Middle School	V
6	Kelsey Clark	\$25	Sedgefield Middle School	V	8	Lindsey Wuerfel	\$25	Rollings Middle School	V
6	Marrissa Hilton	\$25	Gibbes Middle School	II	8	Rowan Armstrong	\$25	Rollings Middle School	V
5	John Black	\$25	Killian Elementary School	I	7	Jennifer Joseph	\$25	Westview Middle School	I
5	Lauren Nordin	\$25	Saluda Elementary School	II	7	Kaitlin McClure	\$25	Branchville High School	II
6	Jessica Zinna	\$25	Cornish Academy Homeschool	II	?	Caitlin Kennedy	\$25	Gregg Middle School	V
4	Elizabeth Stanley	\$25	Varnville Elementary School	VII	6	Koree Stillings	\$25	Gregg Middle School	V
4	Joshua Ginn	\$25	Varnville Elementary School	VII	7	Cole Mickey	\$25	Bates Middle School	II
4	Andie Davis	\$25	Varnville Elementary School	VII	7	Amanda Perez	\$25	Cambridge Academy	I
5	Dusty Stewart	\$25	Holly Springs Elementary	I	8	Jacob Hoyt	\$25	Camden Middle School	II
5	Cassidy Henry	\$25	Lib. Nelson Elementary School	II	8	Justin Eaddy	\$25	Camden Middle School	II
5	Dylan Goodwin	\$25	Hagood Elementary School	I	7	Brandon Whitmire	\$25	Belton Middle School	I
	Tyler Pruitt	\$25	Summerville Elementary	V	7	Taylor Richey	\$25	Belton Middle School	I
5	Paul Lee	\$25	Moore Intermediate School	IV	8	Kayla Broeker	\$25	Carver Edisto Middle School	II
4	Alison Waldman	\$25	Harbison West Elementary	II	7	Jay Wilson	\$25	Cherokee Trail Elementary School	I
5	Erika Carrillo	\$25	Saluda Elementary School	II	7	Sammy Joe White	\$25	Covenant Christian School	II
5	Michael Gonzales	\$25	Condor Elementary School	II	8	Ashley Sowell	\$25	JS Wright Middle School	I
5	Marcus Hannibal	\$25	Center for Inquiry	II	7	Mia Ulmer	\$25	Clark Middle School	I
4	Marvin Hollins	\$25	Forest Heights Elementary I	II	7	Betsy Hodge	\$25	Sangaree Middle School	V
5	Laura Dunn	\$25	Andrews Elementary School	IV	7	Robert Yergeau III	\$25	Pickens Middle School	I
6	Sara Jane Bush	\$25	Cherokee Trail Elementary	I	8	Britney Stewart	\$25	Gibbes Middle School	II
6	Kelly Duncan	\$25	Newberry Middle School	II	8	Jessica Thompson	\$25	Marrington Middle School	V
4	Matthew Lewis	\$25	Sacred Heart Catholic School	II	6	Mehrab Khandkar	\$25	Dent Middle School	II
5	Ricky Smith	\$25	John C. Calhoun Elementary	I	6	Christopher Lewis	\$25	Sacred Heart Catholic School	II
6	Austin Westwood	\$25	Newberry Middle School	II	7	Jerre Gowdy	\$25	Rosemary Middle School	IV
5	Hannah Sauer	\$25	Spann Elementary School	V	8	Austin Godines	\$25	Godines Academy	II
5	Yvette Jones	\$25	Condor Elementary School	II	8	Bryer Turner	\$25	Palmetto Middle/Elementary School	IV
4	Simran Mathews	\$25	Covenant Christian School	II	7	Drew Dixon	\$25	Hammond School	I
5	Andrew Shealy	\$25	Empire Academy Homeschool	II	6	Tomasha McIntyre	\$25	Greer Middle School	I
4	Viola White	\$25	Joseph Keels Elementary	II	7	Nicholas Montalbano	\$25	SRI	V
					7	Cassidy Sorrow	\$25	Diamond Hill Elementary	I

The "WE COULDN'T DO IT WITHOUT YOUR 'AWARDS!'"

Many dedicated people provide much-needed support for the USC Region II Science & Engineering Fair.

These people make it possible! Special thanks go to:

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Students from USC Region II Science & Engineering Fair win big at ISEF in Indianapolis, Indiana, May 5, 2006.

Graham van Schaik of Spring Valley High School wins \$3000 first place award from the U.S. Air Force and second best in the World in the Category of Environmental Science.



From left to right: President Andrew Sorensen, Asif Khan, Graham Van Schaik, and John Hodge II with Dr. Don Jordan, Director of USC Science & Engineering Fair

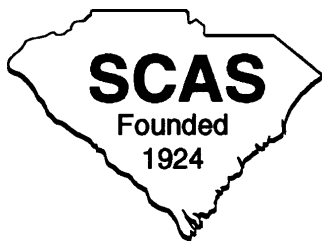
The **University of South Carolina**, with support from the **South Carolina Academy of Science**, sent the following students to **ISEF**: Grand Prize Team Senior Division winners, **Minru Wong and Abigail Khushf** of Dreher High School, Grand Prize Female Senior Division winner **Gina Noh** and Grand Prize Male Senior Division winner **Graham Van Shaik** of Spring Valley High School. Students sent as official observers were **James Cunningham** of Spring Valley High School and **Kristen McLaurin** of Dent Middle School. USC sent **Lisa McAlpine** and **Dale Soblo** of Spring Valley High School to lead the official ISEF party for the State of South Carolina. In addition, **Judith Ray & David Nelson** of Dreher High School were teacher leaders and mentors for the USC Region II. The above six students represented South Carolina at the International Science and Engineering Fair May 7 – 13, 2006 at Indianapolis, Indiana

Graham van Schaik was second best in the world in environmental sciences and won a \$1,500 award. In addition, Graham was recognized with a \$20,000 scholarship to the Albany College of Pharmacy of Union University, a \$500 second place award from the Endocrine Society and a \$3000 first place award from the U.S. Air Force. Robin Henderson, Graham's advisor at Spring Valley High School, will also receive \$300 as part of the U.S. Air Force award. Graham van Schaik's project is titled "Pyrethroids as Endocrine Disruptors: The Effect of Residual Pyrethroid Levels as Found in *L. esculentum* (Tomatoes) on the Abnormal Proliferation of MCF-7 Human Breast Cells" (Pyrethroids are a component of some common pesticides),

Individual Grand winner Gina Noh won an honorable mention award and \$100 from the U.S. Coast Guard for her project on the effect of various anti-corrosive methods on the corrosion process of iron.

James Cunningham of Spring Valley High School and Kristen McLaurin of Dent Middle School served as Fair Ambassadors and led tours of the fair for local Indianapolis school children. Teachers Lisa McAlpine and Dale Soblo of Spring Valley High School accompanied the students and acted as chaperones for all of the students from the South Carolina Region II that attended. Congratulations to Graham van Schaik, Gina Noh, James Cunningham, Kristen McLaurin, Minru Wong and Abigail Khushf of Dreher High School and to the parents and teachers of these students.

ISEF is the largest pre-collegiate science and engineering competition in the world with over 1400 participants from the U.S. and 47 countries, and over \$4 million dollars in awards given out.



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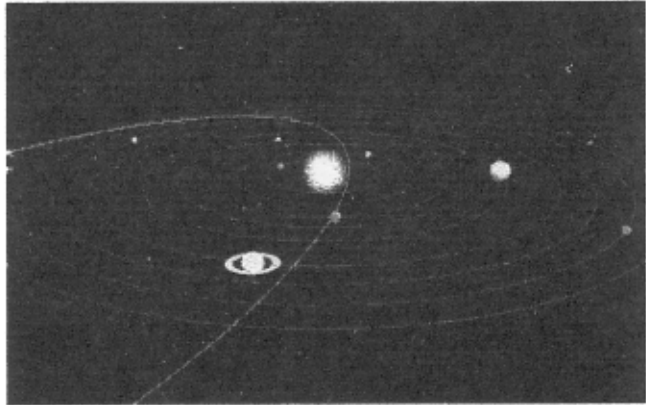


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