SIEMENS News Release

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NORTH CAROLINA STUDENTS SWEEP REGIONAL FINALS OF NATION'S PREMIER HIGH SCHOOL SCIENCE COMPETITION FOR RESEARCH IN BIOCHEMISTRY AND COMPUTER SCIENCE

Regional Winners for 2009 Siemens Competition Announced at Georgia Institute of Technology; Will Move on to National Finals and a Chance at $100,000

Lanair Lett Wins Top Individual Prize; Neil Shah and Katie Shpanskaya Win Top Team Prize

ATLANTA, GA, Nov. 7, 2009 — Research projects in the areas of Biochemistry and Computer Science scored top marks this evening, as Lanair Lett of Henderson, North Carolina and the team of Neil Shah and Katie Shpanskaya of Greensboro and Raleigh, North Carolina respectively, received the highest honors at the Region Six Finals of the 2009 Siemens Competition in Math, Science & Technology, the nation's premier high school science competition.

Tonight's winners will receive thousands of dollars in college scholarships and be invited to compete at the National Finals in New York City from December 3-7, where the winners of the six regional competitions across the United States will vie for scholarships ranging from $10,000 to the grand prize of $100,000. The Siemens Competition, a signature program of the Siemens Foundation, is administered by the College Board.

"These students have just earned their place among the nation's greatest high school scientists," said James Whaley, President of the Siemens Foundation, based in Iselin, New Jersey. "Each year, the students' work becomes more impressive, and in a record-setting year such as this one, their achievements become even more outstanding. We are proud to welcome them into our family of Siemens Scholars and look forward to their participation at the national finals in New York City."

The students presented their research this weekend to a panel of judges from the Georgia Institute of Technology, host of the Siemens Competition Region Six Finals.

Individual Winner
Lanair Lett, a senior at North Carolina School of Science and Mathematics (NCSSM) in Durham, North Carolina won the individual category and a $3,000 college scholarship for his biochemistry project. He examined a specific protein's potential for improving therapeutic methods for treating diabetes. Diabetes is the fifth leading cause of death in America – affecting millions of people each year – though its symptoms often lead to a manifestation into five of the top ten causes, such as heart disease. The research aimed to optimize treatments for diabetes, through a better understanding of Beta cell growth.

The title of the project is *Histone Deacetylase 1 (HDAC-1) Increases B-cell Proliferation in 832/13 B-Cells and Primary Rat Islets*.

“In his project on diabetes, Mr. Lett demonstrated his systematic approach to examine the biochemical role of a key protein called HDAC-1 in modulating the growth of cells that could be used in transplantation therapy,” said Dr. Raquel Lieberman, Assistant Professor in the School of Chemistry and Biochemistry at the Georgia Institute of Technology. “Mr. Lett visibly shows passion and clear vision, two of the most important research characteristics in scientific research,” noted Dr. Yuhong Fan, Assistant Professor in the School of Biology at the Georgia Institute of Technology, “The level of knowledge he demonstrated about the subject’s past research, and supporting materials is easily on a graduate level,” she added.

Mr. Lett suffers from diabetes himself, as does his mother and grandmother, and it was this personal experience that inspired him to conduct research pertaining to the disease. He considers his grandmother – who runs a 24-hr daycare, Nana's Nest, in Youngstown, Ohio – as his personal hero, because to him she is the epitome of self-sacrifice and dedication. This is Mr. Lett’s first research competition, and his dream job would be to work as a medical doctor while doing research involving metabolism and bioenergetics.

Mr. Lett serves as the lifestyles editor of *The Stentorian*, his school newspaper. He was most recently representing his school on the Regional Science Bowl team, which won second place. Mr. Lett also participates in the Science Educational Experience for High School Students (Project SEED) Research Program, and volunteers as his school’s Student Ambassador as well as at the H. Leslie Perry Memorial Library. His mentor for this project was Dr. Jeffery Tessem, Post-Doctoral Fellow, Sarah W. Stedman Nutrition and Metabolism Center, Duke University in Durham, North Carolina.

Team Winners

Neil Shah, a senior in Northwest Guilford High School in Greensboro, North Carolina; and Yekaterina (Katie) Shpanskaya, a sophomore at Math and Science School (Home School) in Raleigh, North Carolina, won the team category and will share a $6,000 scholarship. Their project, titled *Supercomputing Analytical Discovery of Plasma Instabilities in Fusion Energy Reactors*, facilitates the understanding of fusion by analyzing computer-simulated fusion reactor data and paves the way for an efficient analysis of massive amounts of data on powerful computer architectures, consisting of hundreds, or thousands of processors operating in parallel.

“While the problem the team examined was within grasp of the pre-collegiate level, the methods that they used were very expansive and impressive, having the potential to be applied in analysis of many fields that have massive amounts of data, like weather system modeling,” said Dr. Miroslav Begovic, Professor at School of Electrical and Computer Engineering at the Georgia Institute of Technology. “The team worked very well together, complementing each other’s strengths and communicating their parts incredibly well; we definitely couldn’t get them out of their comfort zone,” added Dr. Ken Brown, Assistant Professor in the School of Chemistry and Biochemistry at the Georgia Institute of Technology.

Mr. Shah is a National AP Scholar, AP Scholar with Distinction and National Merit Semifinalist, as well as a member of the Future Business Leaders of America and the President of Weaver Academy Chapter. He won first place in the State Network Design Competition, as well as fifth place in the National

Network Design Competition. Mr. Shah is the Founder/President of the Speech and Debate Team. He is also Co-Captain of FIRST Tech Challenge Team, and serves as a Weaver Academy Student Ambassador. Mr. Shah is an A+ Certified IT Technician Network, a Certified Security Professional and Microsoft Certified Professional. He holds an Honor Status at the National Forensic League, and volunteers in the Natural Science Center of Greensboro. His hobbies include research, programming, reading, and playing Ultimate Frisbee.

Ms. Shpanskaya has been named to the A/B Honor Roll at Broughton High School, and is a member of National Young Leaders. Her favorite subjects are biology, calculus, civics and economics, chemistry, and statistics. Ms. Shpanskaya is a member of the North Carolina State University (NCSU) Students and Technology in Academia and Research and Service (STARS) Alliance. She co-designed and maintains a web site titled "How to Make Humans." She is also a member of the Math Club, Broughton High School Dance Club, Machine Learning and Data Mining Research Team and Public Speaking Club. She also enjoys tutoring math to NCSU's undergraduate students in her free time. She additionally partakes in Animal Science community service and enjoys reading, fiction writing and playing tennis as her hobbies.

The team worked on this project with the help of their mentors: Dr. Anatoli V. Melechko, Associate Professor, Materials Science and Engineering Department, North Carolina State University; Dr. Nagiza Samatova, Professor, Computer Science Department, North Carolina State University and Senior Scientist in Oak Ridge National Laboratory; Dr. C.S. Chang, Research Scientist, New York University; Mr. Guruprasad Kora, Research Scientist, Oak Ridge National Laboratory and Dr. Paul Breimyer, Research Scientist, Lincoln Lab, Massachusetts Institute of Technology.

Regional Finalists
Regional Finalists each received a $1,000 scholarship.

Regional Finalists in the individual category were:

- Tian-Yi (Damien) Jiang, North Carolina School of Science and Mathematics, Durham, NC
- Aryan Khojandi, Thomas Jefferson High School for Science and Technology, Alexandria, VA
- Darpan Patel, Joseph Wheeler High School, Marietta, GA
- Jinge Su, North Carolina School of Science and Mathematics, Durham NC

Regional Finalists in the team category were:

- Jonathan Bryan and Linus Liang, Oak Ridge High School, Oak Ridge, TN
- Di Deng and Patrick Yang, North Carolina School of Science and Mathematics, Durham, NC
- Xinran (Ryan) Liu and Grace Prazniak, Oak Ridge High School, Oak Ridge, TN
- Shawn Tang, Brian Chiang and Eric Walsh, Troy High School, Fullerton, CA

The Siemens Competition
The Siemens Competition was launched in 1998 to recognize America's best and brightest math and science students. A record number of 1,348 projects were received this year for the Siemens Competition, an increase of 12 percent over 2008 figures. The number of students submitting projects increased by 14 percent while more students than ever, 2,151, registered to enter.

Entries are judged at the regional level by esteemed scientists at six leading research universities which host the regional competitions: California Institute of Technology; Carnegie Mellon University; Georgia Institute of Technology; Massachusetts Institute of Technology; University of Notre Dame; and The University of Texas at Austin.

Winners of the regional events are invited to compete at the National Finals at New York University in New York City, December 3 – December 7, 2009. Visit www.siemens-foundation.org on December 7, 2009 at 9:30 am EST to view a live webcast of the National Finalist Award Presentation. You can also log into and follow the Siemens Foundation on Twitter (http://twitter.com/SFoundation) for the latest information and announcements throughout this year's competition.

About the Siemens Foundation
The Siemens Foundation provides more than $7 million annually in support of educational initiatives in the areas of science, technology, engineering and math in the United States. Its signature programs, the Siemens Competition in Math, Science & Technology and Siemens Awards for Advanced Placement, reward exceptional achievement in science, math and technology. The newest program, The Siemens We Can Change the World Challenge, encourages K-12 students to develop innovative green solutions for environmental issues. By supporting outstanding students today, and recognizing the teachers and schools that inspire their excellence, the Foundation helps nurture tomorrow's scientists and engineers. The Foundation's mission is based on the culture of innovation, research and educational support that is the hallmark of Siemens' U.S. companies and its parent company, Siemens AG. For more information, visit www.siemens-foundation.org.

The College Board

The College Board is a not-for-profit membership association whose mission is to connect students to college success and opportunity. Founded in 1900, the College Board is composed of more than 5,600 schools, colleges, universities and other educational organizations. Each year, the College Board serves seven million students and their parents, 23,000 high schools, and 3,800 colleges through major programs and services in college readiness, college admissions, guidance, assessment, financial aid, enrollment, and teaching and learning. Among its best-known programs are the SAT®, the PSAT/NMSQT® and the Advanced Placement Program® (AP®). The College Board is committed to the principles of excellence and equity, and that commitment is embodied in all of its programs, services, activities and concerns. For further information, visit www.collegeboard.com.

NOTE TO EDITORS: Broll and photos of winners available on request.

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