

CONTACT:

Valerie Francois
Siemens Foundation
732-590-5292
valerie.francois@siemens.com

Jennifer Moore
Weber Shandwick
212-445-8430
jennifer.moore@webershandwick.com

BIOPHYSICS AND CHEMISTRY RESEARCH HONORED AT NATION'S PREMIER HIGH SCHOOL SCIENCE COMPETITION

Regional Winners for 2009 Siemens Competition Declared at Carnegie Mellon University; Will Move on to National Finals for Chance at \$100,000

Ruoyi Jiang Wins Top Individual Prize; Xiao Zhou, Israt Ahmed and Stephanie Chen Win Top Team Prize

PITTSBURGH, PA Nov. 21, 2009 — Research projects in the areas of biophysics and chemistry scored top marks this evening, as Ruoyi Jiang of East Setauket, New York and the team of Xiao (Cathy) Zhou of Flushing, New York; Israt Ahmed of Woodhaven, New York; and Stephanie Chen of Bayside, New York received the highest honors at the Region Four 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 on December 3-7, where the winners of six regional competitions across the United States will vie for scholarships ranging from \$10,000 to the top 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 Carnegie Mellon University, host of the Siemens Competition Region Four Finals.

Individual Winner

Ruoyi Jiang, a senior at Ward Melville High School in East Setauket, New York won the individual category and a \$3,000 college scholarship for his biophysics project that investigated the molecular basis of a prominent mechanism of chemotherapy drug resistance. The project, titled *Targeting Loop Dynamics in $\beta I/\beta III$ Isotype Tubulin: The Application of In Silico Techniques in Combating Chemotherapy Drug Resistance*, uses state of the art computational techniques to develop a molecular understanding of how Taxol functions to kill tumor cells.

“Mr. Jiang’s results allowed him to predict the long range effects of drug binding on the structure of that protein,” said Dr. Gordon Rule, Professor in the Department of Biological Science at Carnegie Mellon University. “The technique was validated using Taxol, showing that his computational results are consistent with experimental data. These results suggest that this method may have an important contribution in the development of a new class of pharmaceuticals.”

Mr. Jiang has placed at a variety of science competitions including the National Science Bowl. Mr. Jiang received an Honorable Mention in the Toshiba ExploraVision Competition as well as recognition for his involvement in the Science Olympiad. He is editor of his school newspaper, *Kaleidoscope*, and a member of the Science Bowl Team. His favorite subject is AP Physics.

Mr. Jiang hopes to become a research lab director upon completion of his studies. In addition to his academic accomplishments, he spends his free time doing volunteer work at Stony Brook University Hospital. He enjoys playing the violin and tennis and loves to draw. He also speaks fluent Mandarin. Mr. Jiang worked on this project with his mentor, Dr. Carlos Simmerling, Professor of Chemistry in the Department of Chemistry at Stony Brook University in Stony Brook, New York as well as Dr. George J. Baldo, Director of InSTAR in East Setauket, New York.

Team Winners

Juniors Cathy Zhou and Israt Ahmed of Francis Lewis High School in Fresh Meadows, New York along with their teammate Stephanie Chen of Stuyvesant High School in New York City won the team category and will share a \$6,000 scholarship. The team’s archeological project titled *ESR Dating “Early Men” and Their Tools at Pradayrol, France and Ainikab I, Russia: “So Easy a Caveman Can Do It!”* may provide new insights into hominid migration out of Africa. The team’s dating results allow us to understand how hominids migrated through Europe and adapted to rapid climate change and the species with which they interacted.

“The team dated one site in Russia in the Caucasus Mountains that documented some of the earliest hominid migration out of Africa into Europe and Asia. In another site in France, they documented evidence of Neanderthals at a date earlier than previously known,” said Dr. Ruth Fauman-Fichman, Visiting Associate Professor in the Department of History at Carnegie Mellon University and Research Associate in the Department of Anthropology at the University of Pittsburgh. “The students spent many arduous hours preparing samples in the laboratory for their dating technique. This required them to integrate information from many areas. Archeology requires both enthusiasm for the subject and the ability to spend long hours in the laboratory and this team did both,” she said.

Ms. Zhou’s favorite subjects are biology, physics, math, world history and English. She’s currently taking AP Chemistry. Since 2007, she has been in the Junior ROTC as an Academic Team Member and Regional Competition Participant, scoring third place in the Academic Bowl, as well as serving on the Fencing Team. She is a member of the Robert F. Kennedy (RFK) Science Research Institute and former Treasurer of her school’s Media Production Club. Ms. Zhou would like to invent innovative technology that would improve environmental quality or space explorations. Thus, she plans to study environmental engineering or astronomy, upon entrance to college. In 2008, Ms. Zhou volunteered at Councilman John Liu’s office in Flushing. She has been playing the flute for four years, and in her free time, she enjoys rollerblading and ice skating. She also rejoices in ballroom dancing, as well as exploring the Great Outdoors and water rafting. Ms. Zhou speaks fluent Mandarin and is also studying Spanish.

Mr. Ahmed lists English, physics, world history, government and biology as his favorite subjects in school. His interest in government and history is evidenced by his participation in AP Government and his leadership role as President of his school's Global Warming Awareness Club. Like Ms. Zhou, he is a member of the RFK Science Research Institute. He hopes to one day become both a geneticist and a neurologist, in order to use the potential of stem cells to help cure diseases. Mr. Ahmed enjoys dancing in his free time, specifically, Pop and Locking and the basics of break dancing. In his free time he plays tennis and is involved with video editing and production. He was born in Bangladesh and speaks Bengali, Japanese, Spanish, Hindi and Latin.

Ms. Chen's favorite classes include AP Biology, chemistry, mathematics, physics and English. She is also a member of the RFK Science Research Institute, and a member of Stuyvesant High School's Biology Olympiad, Problem Solvers and Young Arts Society. She is active in her school's German Club as well as the Japanese Culture Club. She plans to become a heart surgeon upon completion of her studies. Beyond her academic pursuits, Ms. Chen is very passionate about art, fashion design, modeling, and charity. Specifically, she is a member of iDesign and Charity a La Mode, both fashion design clubs. She is a member of Cosplay Club, Neo Gokuraku (an anime club) and Stuy Build, a community service club. In her spare time, Ms. Chen draws anime and designs clothing, and also plays piano and alto saxophone. She speaks Spanish and Mandarin, and is currently teaching herself German and Japanese.

The team's mentor for this project was Dr. Bonnie Blackwell, Research Scientist at Williams College in Williamstown, Massachusetts. Dr. Blackwell also directs the Robert F. Kennedy Science Research Institute.

Regional Finalists

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

Regional Finalists in the individual category were:

- Cynthia Chen, The Brearley School, New York, NY
- Joshua Pfeffer, North Shore Hebrew Academy High School, Great Neck, NY
- Jason Shieh, The Bronx High School of Science, Bronx, NY
- Kevin Zhao, Ward Melville High School, East Setauket, NY

Regional Finalists in the team category were:

- Shaunak Bakshi and Peter Massey, Manhasset High School, Manhasset, NY
- Erica Chung, Bergen County Academy for the Advancement of Science and Technology, Hackensack, NJ; and David Park, Herricks High School, New Hyde Park, NY
- Jiayi Lin and Ellis Darby, New Explorations into Science, Technology and Math High School, New York, NY
- Anirudh Nandan, Los Alamitos High School, Los Alamitos, CA; Salonee Shah, W. Tresper Clarke High School, Westbury, NY; and Michelle Leonetti, Long Beach High School, Lido Beach, NY

The Siemens Competition

The Siemens Competition was launched in 1998 to recognize America's best and brightest math and science students. In another record-setting year, 2,151 students registered to enter the Siemens Competition in Math, Science and Technology in 2009 – more than ever before - for a total of 1,348 project submissions – a 14% increase in project submissions over 2008 figures and more than a 12% increase in the number of registrations.

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 further 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 5,700 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 admission, 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: B-roll and photos of winners available on request.

###