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EXCEPTIONAL TEENS FROM ILLINOIS AND MICHIGAN CELEBRATED FOR BIOLOGY AND MATHEMATICS RESEARCH IN NATION'S PREMIER HIGH SCHOOL SCIENCE COMPETITION

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

Marissa Suchyta Wins Top Individual Prize; Randy Jia and David Lu Win Top Team Prize

SOUTH BEND, IN, Nov. 14, 2009 — Research projects in the areas of biology and mathematics scored top marks this evening, as Marissa Suchyta of South Barrington, Illinois and the team of Randy Jia of Rochester Hills, Michigan and David Lu of Bloomfield Hills, Michigan received the highest honors at the Region Three 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 University of Notre Dame, host of the Siemens Competition Region Three Finals.

Individual Winner

Marissa Suchyta, a senior at the University of Chicago Laboratory High School in Chicago, Illinois won the individual category and a \$3,000 college scholarship for her biology project. She researched the mechanism by which the protein Geminin prevents DNA from replicating more than one time before a cell divides. Over-replication of DNA will lead to genetic instability, which in turn gives rise to cells exhibiting uncontrolled cell division. The project, titled, *Geminin mutant reveals the mechanism to inhibit DNA re-replication*, has implications to develop new approaches to treating diseases like cancer.

“Ms. Suchyta understood that the research was a great approach to study the replication process. By studying a modified Geminin protein she could investigate how Geminin structure affects its function,” said Dr. Joseph O’Tousa, Professor in the Department of Biological Sciences at the University of Notre Dame. “It is important that the replication machinery allows one and only one start during the S phase of mitosis, and Geminin regulates this. The work adds to our knowledge of how DNA replication is controlled, a fundamental process involved in the development and proper maintenance of tissues and a potential target in managing disease conditions,” he said.

Ms. Suchyta is taking college courses in addition to her full high school schedule. Even with this rigorous course load, she has maintained straight A’s throughout all of high school. In college, she would like to double major in Neurobiology and Molecular/Cellular Biology, eventually becoming a neurosurgeon with a PhD in molecular oncology. She placed second at Nationals in the National History Day Competition and was named a Regional Winner in the Discovery Young Scientist Challenge. Ms. Suchyta competes on the Model United Nations and Varsity Science Olympiad Teams.

Ms. Suchyta founded the first Midwest chapter of the American Cancer Society’s “High Schools Against Cancer” campaign and began her own nonprofit organization that donates gift buckets to teenage oncology patients. Through her work with the American Cancer Society (ACS), she has been invited to be on the organization’s board and has presented research at the ACS Annual Meeting. Additionally, Ms. Suchyta has been the President of the Gavel Club, Captain of the Forensics Team and the Captain of the Mock Trial Team. She is also a Peer Leader and is near completion of earning the Girl Scout Gold Award. Furthermore, Ms. Suchyta is a competitive ballroom dancer, specifically in the Latin division. She plays the violin as well as the mandolin and speaks French. Her mentor for this project was Dr. Thomas McGarry, Assistant Professor of Medicine at the Feinberg School of Medicine at Northwestern University in Chicago, Illinois.

Team Winners

Junior Randy Jia and sophomore David Lu, both students from the Detroit Country Day School in Beverly Hills, Michigan, won the team category and will share a \$6,000 scholarship. Their graph theory project, titled *Matching Preclusions for Augmented Cubes*, presents a way to measure the strength of a network in the event of link failure. This study examines the matching preclusion number as it relates to the augmented cube graph. The augmented cube has been proposed as an example of a network that is resistant to link failure.

“In certain instances a desirable property of a network is that each node can pair up with a partner. The team answers the question of how many links need to be broken until it’s no longer possible to pair up the node in the augmented cube,” said Dr. David Galvin, Assistant Professor in the Department of Mathematics at the University of Notre Dame. “Their project uses clever mathematical techniques and extends our understanding of an important and natural network parameter.”

Mr. Jia is a three-time United States Math Olympiad Qualifier and also placed tenth in the Michigan Math Prize Competition. He is a member of the Detroit Country Day School’s Investment and Math Competition Clubs. Mr. Jia serves as a helper for his school’s Math Invitational and a scorer for the Oakland County Mathcounts program. He enjoys studying both math and physics most in school, and his older brother was a Siemens Competition Semifinalist three years ago. He participates in various

school volunteer opportunities, such as Open House, and also serves as an Auction Volunteer. Mr. Jia would like to go to college for finance/economics, and hopes to one day become a fund manager on Wall Street.

Mr. Lu is a Science Olympiad participant and active member of Quizbowl. He participated in several mathematics competitions before, and also attended the USA Mathematical Olympiad program in the ninth grade. His favorite subjects to study in school are math and the sciences, and he aspires to be a mathematics professor. Mr. Lu is a runner and is a member of the Detroit County Day School's Cross Country and Track and Field teams.

The team's mentor for this project was Eddie Cheng, a Professor at Oakland University in Rochester, Michigan.

Regional Finalists

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

Regional Finalists in the individual category were:

- Angela Ma, Carmel High School, Carmel, IN
- Arjun Puranik, William Fremd High School, Palatine, IL
- Dennis Tseng, William Mason High School, Mason, OH
- Kevin Wang, Wylie E. Groves High School, Beverly Hills, MI

Regional Finalists in the team category were:

- Qingyuan Chen, University of Chicago Laboratory High School, Chicago, IL; and Fred Schmitt, Naperville Central High School, Naperville, IL
- Renjay Liu and Bingjie Qiu, Troy High School, Troy, MI; and Lucille Zhang, Detroit Country Day School, Beverly Hills, MI
- Qinqin Yu and Sarah Kang, Rock Bridge High School, Columbia, MO
- David Zheng and Michael Luo, Carmel High School, Carmel, IN

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.

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