

MEDIA CONTACTS:

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

Alexander Aizenberg
Weber Shandwick
(212) 445-8414
aaizenberg@webershandwick.com

Jennifer Sheeley
Weber Shandwick
(212) 445-8430
[jsheelley@webershandwick.com](mailto:jsheeley@webershandwick.com)

TEXAS AND NORTH CAROLINA STUDENTS TACKLE LIFESAVING RESEARCH IN CHEMISTRY AND GENETICS, TAKING HOME THE GRAND PRIZE AT NATION'S PREMIER HIGH SCHOOL SCIENCE COMPETITION

\$100,000 WINNERS ANNOUNCED IN THE 2008 SIEMENS COMPETITION IN MATH, SCIENCE & TECHNOLOGY

Wen Chyan of Denton, Texas, Wins Individual Grand Prize;
Sajith M. Wickramasekara of Raleigh, North Carolina and Andrew Y. Guo of Cary,
North Carolina, Win Team Grand Prize

NEW YORK, NY, December 8, 2008 – The nation's brightest minds and the innovators of tomorrow bravely took on groundbreaking research of life-threatening infections and deadly side effects of chemotherapeutics. As a result, Wen Chyan and the team of Sajith M. Wickramasekara and Andrew Y. Guo were named \$100,000 Grand Prize winners in the 2008 Siemens Competition in Math, Science & Technology. The prestigious Siemens Competition, a signature program of the Siemens Foundation, is administered by the College Board. The annual awards were presented this morning at New York University, host of the Siemens Competition National Finals.

Wen Chyan, a senior at Texas Academy of Mathematics and Science in Denton, Texas, won the \$100,000 scholarship in the individual category for chemistry research on combating hospital-related infections. Sajith M. Wickramasekara and Andrew Y. Guo, both seniors at North Carolina School of Science and Mathematics in Durham, North Carolina, won the \$100,000 prize in the team category, which they will share equally, for genetics research of chemotherapy. The three science superstars have an exciting journey ahead; they will ring The Closing Bell™ at the New York Stock Exchange in February among other honors.

"These remarkable students have achieved the most coveted and competitive high school science recognition in the nation," said Thomas McCausland, Chairman of the Siemens Foundation. "There is no doubt that these scholars will change the world, starting right now, with their passion for math and science," he said.

The national finals were judged by a panel of nationally renowned scientists and mathematicians headed by lead judge Dr. Joseph Taylor, winner of the Nobel Prize in Physics and James S. McDonnell Distinguished University Professor of Physics, Emeritus, Princeton University. Eighteen national finalists competed in this year's national finals, including six individuals and

six teams. The finalists previously competed at one of six regional competitions held at leading research universities throughout the month of November.

The Winning Projects

Wen Chyan won the top prize, and a \$100,000 college scholarship, for his bioengineering research of antimicrobial coatings for medical devices. Mr. Chyan looked to design a specialized coating for medical devices aimed to prevent common hospital infections, called nosocomial infections, which afflict more than two million patients each year, killing more than 100,000 of those patients. Mr. Chyan's project is entitled, Versatile Antimicrobial Coatings from Pulse Plasma Deposited Hydrogels and Hydrogel Composites.

“This research was not only a creative idea, but required a proactive approach where cross-disciplinary initiatives had to be taken. The fields of electrochemistry, material science and biology all had to be explored in depth by Mr. Chyan,” said W. Mark Saltzman, Goizueta Foundation Professor of Chemical and Biomedical Engineering at Yale University, a competition judge. “With further testing, these findings have the potential to improve a wide range of medical devices from intravascular devices at hospitals or catheters used in insulin pumps.”

Mr. Chyan would like to major in Chemistry or Chemical Engineering once in college. Upon completing his studies he would like to pursue a position in academia, preferably at a research university where he can continue conducting research and teach at the same time. His various honors in science include recognition from the U.S. National Chemistry Olympiad, U.S. Biology Olympiad and Texas Science and Engineering Fair. He is the recipient of the Texas Academy of Mathematics and Science Summer Research Scholarship (2008), and also founded a student chapter of the American Chemical Society at the University of North Texas. He also composes music and plays piano and violin in his spare time.

Mr. Chyan developed an interest in science with the encouragement of his parents, both scientists, whom would take him to tour their laboratories and perform demos since an early age. His mentor for this project was Dr. Richard B. Timmons, of the Department of Chemistry and Biochemistry at the University of Texas at Arlington.

Sajith Wickramasekara and Andrew Guo won the team category and will share a \$100,000 scholarship for their genetics research that has the potential to easily identify new chemotherapeutic drugs and greatly improve existing ones. Their project is entitled, *A Functional Genomic Framework for Chemotherapeutic Drug Improvement and Identification*.

“Mr. Wickramasekara and Mr. Guo used a modern way of screening for drugs with yeast to address an important problem regarding the limitations of chemotherapy including resistance, toxicity and discrimination,” said Dr. Jeffrey Pollard, Louis Goldstein Swan Chair in Women's Cancer Research, Department of Developmental and Molecular Biology, Albert Einstein College of Medicine, a competition judge. “The project required a very large amount of work, organization, and discipline to obtain and then fully verify these results, which the team did in three ways. Sophisticated, innovative bioinformatics also enabled them to identify new therapeutic targets and potential drugs. Not only is this a process currently done by many large

pharmaceutical companies, with much more resources, but my own graduate students have done similar work for their graduate theses.”

Mr. Wickramasekara is the team leader and heard about the Siemens Competition in 2006 when seniors from his high school were selected as Regional Finalists. Mr. Wickramasekara is Captain of his school's Science Bowl and has participated in various science competitions including the 2008 Intel International Science and Engineering Fair, the North Carolina State Science and Engineering Fair as well as the North Carolina Junior Science Humanities Symposium. He is an Eagle Scout in the Boy Scouts of America and dreams of one day owning his own biotech startup, specializing in personalized medicine.

Mr. Guo is a Science Olympiad winner and Co-Captain of the Quiz Bowl. Mr. Guo received First Place State Team in the Goldman Sachs National Economics Challenge. Mr. Guo was captain of the 2008 State Champion Varsity Tennis Team and plays Ultimate Frisbee as part of his extracurricular activities. Mr. Guo speaks Mandarin Chinese and aspires to manage his own company one day. Mr. Guo's mother works in the field of genetics and sparked his interest to study the sciences by discussing her work and activities at home, and he credits his father with helping him become who he is today.

Both team members co-founded the Student Journal of Research of the North Carolina School of Science and Mathematics; they both serve as Editors of the publication. Additionally, Mr. Wickramasekara and Mr. Guo were recently named 2009 National Merit Scholarship Semifinalists.

The team's project combined traditional genetics with cutting-edge computational modeling to streamline the gene discovery process. Their project addresses the need in the field to identify new genes to target for cancer therapy. The team worked on this project with the help of their mentor, Dr. Craig B. Bennett, Assistant Professor, Duke University Medical Center in Durham, NC, and their high school advisor, Dr. Myra Halpin, Dean of Science, North Carolina School of Science and Mathematics, Durham, NC.

The other national winners of the 2008 Siemens Competition were:

Individuals

- \$50,000 scholarship – Eric K. Larson, Eugene, Oregon
- \$40,000 scholarship – Nityan Nair, Hastings-on-Hudson, New York
- \$30,000 scholarship – James Meixiong, Evans, Georgia
- \$20,000 scholarship – Ashok Cutkosky, Columbia, Missouri
- \$10,000 scholarship – Hayden C. Metsky, Millburn, New Jersey

Teams

- \$50,000 scholarship – Eugenia Volkova of South Salem, New York and Alexander Saeboe of Katonah, New York
- \$40,000 scholarship – Erika Debenedictis and Duanni (Tony) Huang of Albuquerque, New Mexico
- \$30,000 scholarship – Christine S. Lai and Diyang Tang of Acton, Massachusetts

- \$20,000 scholarship – Raphael-Joel (RJ) Lim of Indianapolis, Indiana and Mark Zhang of Sugar Land, Texas
- \$10,000 scholarship – Aanand A. Patel and William Hong of Fullerton, California

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, 1,893 students registered to enter the Siemens Competition with a total of 1,205 projects submitted – this includes an increase of more than 10 percent in team and individual project submissions and an increase of more than 16 percent 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 compete at the National Finals which take place at New York University in New York City, December 5 – December 8, 2008. Please visit <http://www.siemens-foundation.org/en/competition.htm> for more information.

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 K12 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.

About 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 association is composed of more than 5,400 schools, colleges, universities, and other educational organizations. Each year, the College Board serves seven million students and their parents, 23,000 high schools, and 3,500 colleges through major programs and services in 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: Photos and b-roll of winners is available upon request.

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