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STUDENTS FROM KENTUCKY AND TEXAS NAMED REGION TWO SIEMENS COMPETITION WINNERS

Winners From Regional Competition Move on to National Finals in Washington, D.C.

**Sanjana Rane (Prospect, Ky.) Wins Top Individual Honors;
Robert Luo and Helen Zhang (Dallas) Win Top Team Honors**

ISELIN, NJ, Nov. 16, 2015 – Months of research and preparation in science, technology, engineering and mathematics (STEM) fields paid off for three students named National Finalists in the Siemens Competition in Math, Science & Technology after earning top spots in Region Two. **Sanjana Rane** of Prospect, Ky. earned top individual honors and a \$3,000 scholarship for research to discover new ways to detect and treat renal fibrosis. A study on novel therapy for the treatment of acute myeloid leukemia (AML) earned **Robert Luo** and **Helen Zhang**, both of Dallas, the \$6,000 shared team scholarship and spots in the finals of the nation's premier research competition for high school students.

The students presented their research this weekend to a panel of judges at The University of Texas at Austin, host of the Region Two Finals. The top winners now move to the final round to present their work at the National Finals in Washington, D.C., December 4-8, 2015, where \$500,000 in scholarships will be awarded, including two top prizes of \$100,000. The Siemens Competition, a signature program of the Siemens Foundation, is administered by Discovery Education.

"The quality of submissions this year is incredibly impressive," said David Etwiler, CEO of the Siemens Foundation. "This is really graduate-level work conducted by high school students to improve the lives of people around the globe. We're proud to further that cause."

The Winning Individual for Region Two

Sanjana Rane, a senior from duPont Manual High School in Louisville, Ky., won the individual category and a \$3,000 scholarship for her project entitled, "Effects of the Environmental Pollutant Acrolein on Renal Fibrosis."

Sanjana's research has helped discover how a particular protein could be used to detect and treat renal fibrosis, preventing its progression into end-stage renal disease – an incurable total failure of the kidneys.

"Sanjana identified and presented a novel role of a protein that could vastly change the way we're able to detect and treat kidney fibrosis before it progresses to life-threatening kidney disease" said competition judge Alan Lloyd, Professor of Molecular Biosciences at The University of Texas at Austin. "The time and commitment made to reforming and retesting her hypotheses advanced her findings and their clinical application – which are traits of a great scientist."

An interest in pursuing medical research arose for Sanjana when she read a national newspaper story which ranked Louisville, her hometown, as one of the worst air quality cities in the United States. Sanjana began looking into the dangers of air pollution and learned about the chemical acrolein, which is found in both cigarette and industrial smoke and can cause kidney damage. As she delved further into the research, she began to focus on how to shift the chemical's influence on the kidneys using a particular protein as a therapeutic target.

Looking forward to a potential career, Sanjana is interested in pursuing medicine and practicing regenerative medicine to explore how to use stem cells to treat diseases like cancer, multiple sclerosis and ALS.

Beyond academics, Sanjana starts at outside back for her high school's soccer team and mentors kindergarten students at a local elementary school.

Sanjana's mentor is Shunying Jin, Research Associate at the University of Louisville.

The Winning Team for Region Two

Robert Luo and Helen Zhang, both of Dallas, won the team category and will share a \$6,000 scholarship for their project entitled, "A Novel Therapy for the Treatment of Acute Myeloid Leukemia."

The team identified a new potential target for the treatment of acute myeloid leukemia, the most common adult acute leukemia and a life-threatening disease. The combination of family experiences with cancer and the science of the topic piqued Robert and Helen's interest in tackling this project and bringing the world one step closer to solving the global problem of leukemia.

"Acute myeloid leukemia is a remarkably difficult cancer to treat, which makes Robert and Helen's research results that much more valuable," said competition judge Jason Upton, Assistant Molecular Genetics and Microbiology Professor at The University of Texas at Austin. "New ideas and approaches to treatment are critically important. The direction of Robert and Helen's results is intriguing and provides a solid foundation on which to build."

Robert Luo, a junior at Highland Park High School in Dallas, serves as the project team lead. He is an Academic Decathlon participant, a tutor to underserved children and violinist in the Dallas Asian-American Youth Orchestra (DAAYO). Robert aspires to become a physician, computational chemist or software engineer. In college, he plans to major in chemistry, biology and/or computer science.

Helen Zhang, a senior at Highland Park High School in Dallas, has been recognized as a National Merit Commended Scholar, recently co-authored a piece published in *Nature* and took ninth place in a policy debate at the Texas University Interscholastic League State Cross-Examination Debate tournament. Helen co-captains the Highland Park High School Debate Team, spends time volunteering at the University of Texas (UT) Southwestern Medical Center and practices taekwondo.

The team's mentor is Dr. Mi Deng, postdoctoral researcher at the UT Southwestern Medical Center.

Regional Finalists

The remaining regional finalists each received a \$1,000 scholarship.

Regional Finalists in the individual category were:

- Neha Narayan, Friendswood High School, Friendswood, Texas
- Edward Park, Las Cruces High School, Las Cruces, N.M.
- Anirudh Suresh, St. John's School, Houston
- Jovan Zhang, Los Alamos High School, Los Alamos, N.M.

Team Regional Finalists were:

- Arjun Guru and Maya Guru, The Altamont School, Birmingham, Ala.
- Priyanka Konan and Ritika Bharati, Hamilton High School, Chandler, Ariz.
- David Xiang, Westwood High School, Austin, Texas; Eric Li, Clements High School, Sugarland, Texas and Amber Lu, Texas Academy of Math and Science, Denton Texas
- Shoshana Zhang and Colleen Dai, Texas Academy of Mathematics and Science, Denton, Texas

The Siemens Competition

Launched in 1998, the Siemens Competition is the nation's premier science research competition for high school students. Nearly 4,000 students registered for this year's competition and a total of 1,781 projects were submitted for consideration. 466 students were named Semifinalists and 97 were named Regional Finalists. The students present their research in a closed, online forum, and entries are judged at the regional level by esteemed scientists at six leading research universities which host the regional competitions: Georgia Institute of Technology, Massachusetts Institute of Technology, California Institute of Technology, Carnegie Mellon University, University of Notre Dame and The University of Texas at Austin.

For news and announcements about the Regional Competitions and the National Finals, follow us on Twitter [@SFoundation](#) (#SiemensComp) and like us on Facebook at [Siemens Foundation](#). A live webcast of the National Finalist Awards Presentation will also be available online at 11 a.m. EST on December 8 at www.siemens-foundation.org.

Interviews, video and photos available by visiting
<http://siemensusa.synapticdigital.com/US/Siemens-Foundation>

The Siemens Foundation

The [Siemens Foundation](#) has invested more than \$90 million in the United States to advance workforce development and education initiatives in science, technology, engineering and math. The Foundation's mission is inspired by the culture of innovation, research and continuous learning that is the hallmark of Siemens' companies. Together, the programs at the Siemens Foundation are helping close the opportunity gap for young people in the U.S. when it comes to STEM careers, and igniting and sustaining today's STEM workforce and tomorrow's scientists and engineers. Follow the Siemens Foundation on [Facebook](#) and [Twitter](#).

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