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## **STUDENTS FROM MINNESOTA AND INDIANA NAMED REGION THREE SIEMENS COMPETITION WINNERS**

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

**Vikas Maturi (Carmel, Ind.) Wins Top Individual Honors;  
Evelyn McChesney (Andover, Minn.) and Madeline McCue (Minneapolis)  
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 Three. **Vikas Maturi** of Carmel, Ind. earned top individual honors and a \$3,000 scholarship for his research on the reduction of pain in ophthalmic disease treatment. Research on turning commonplace bacteria into antibiotics earned **Evelyn McChesney** of Andover, Minn. and **Madeline McCue** of Minneapolis 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 Notre Dame, host of the Region Three 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.

"Every year, Siemens Competition finalists produce advanced projects and research tackling critical subjects and 2015 is no different," said David Etwiler, CEO of the Siemens Foundation. "I look forward to watching the rest of the competition unfold and commend the participants for the impressive projects they've developed."

### **The Winning Individual for Region Three**

**Vikas Maturi**, a senior from Carmel Senior High School in Carmel, Ind., won the individual category and a \$3,000 scholarship for his project entitled, "Engineered Intraocular Injection Guide (IIG): Pain Reduction in Ophthalmic Disease Treatment."

While Vikas worked a summer job at an eye disease treatment center near his home, he became motivated to develop a product that could reduce or eliminate pain from pre-injection procedures for ophthalmic patients.

“It’s rare to see this level of progress achieved in an independent project, but Vikas has single-handedly advanced pain reduction for ophthalmic patients,” said competition judge Dr. W. Matthew Leevy, Research Associate Professor, Department of Biological Sciences and Director, Biological Imaging at the University of Notre Dame. “Vikas identified a problem and invented a device – after a successful critical trial. This sort of exhaustive and thorough problem solving is worth celebrating.”

Vikas Maturi aspires to be a social designer or design engineer and anticipates majoring in product design and/or biomechanical engineering in college. Vikas is especially inspired by the growing incorporation of engineering in the social design world – he loves his Engineering Design and Development class. Currently, Vikas and his research collaborator are modeling and prototyping a product that captures, redirects and filters flood water in developing countries. Outside of the classroom, Vikas enjoys playing soccer and piano, and also serves as president of TechHOUNDS Robotics, of which he leads a 140-person team and implements STEM outreach initiatives.

Vikas’ mentor is Dr. Kimberly Vogt, Professor of Biology at Marian University.

### **The Winning Team for Region Three**

Evelyn McChesney of Andover, Minn. and Madeline McCue of Minneapolis, Minn. won the team category and will share a \$6,000 scholarship for their project entitled, “Engineering a broad-spectrum antibacterial probiotic via inclusion of antimicrobial peptide – encoding DNA, year two.”

The team of Evelyn and Madeline engineered a genetic system that can be used to turn commonplace bacteria into antibiotics. With this project the world can combat the growing amount of antibiotic-resistant pathogenic bacteria that are causing major problems in global health care.

“Observing the balanced partnership of Evelyn and Madeline was impressive and an important aspect to the quality of their collaborative project,” said competition judge Dr. Jed Fisher, Research Professor, Department of Chemistry and Biochemistry at the University of Notre Dame. “The scientific dialogue, commenced by one team member and enhanced by the other, showcased the depth of their study and the application of their antibiotics alternative.”

Evelyn McChesney, a senior at Breck School in Golden Valley, Minn., is a second-degree black belt, serves as captain of her school’s Robotics Team and was the recipient of the Science Department Book Award. Evelyn looks to her mother as her role model and has always been inspired by her passion for work no matter how stressful it may be.

Madeline McCue, a senior at Breck School in Golden Valley, Minn., has been named a National Merit Scholar Semifinalist and received the First Grand Prize at the Minnesota Academy of Science State Science Fair. Coming from a pair of physician parents, Madeline has been hearing about medical updates around the dinner table for many years. Her father taught her about the basic principles of algebra when she was three and she has been hooked ever since. Madeline speaks English, Spanish, Italian and Vulcan. She has performed in a circus and enjoys playing the piano and dancing.

The team’s mentors are Ms. Louis Fruen, Science Research Instructor at Breck School and Dr. Yiannis Kaznessis, Department of Chemical Engineering and Materials Science at the University of Minnesota.

### **Regional Finalists**

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

Regional Finalists in the individual category were:

- Tushar Dwivedi, Neuqua Valley High School, Naperville, Ill.
- Sarvasva “Savy” Raghuvanshi, Neuqua Valley High School, Naperville, Ill.
- Leah Umanskiy, University of Chicago Laboratory High School, Chicago
- Rachel Zhang, Parkway South High School, Manchester, Mo.

Team Regional Finalists were:

- Cole Maxwell, Breck School, Golden Valley, Minn. and Isabella Jennings, Breck School, Golden Valley, Minn.
- Kevin Qian, Wayzata High School, Plymouth, Minn. and David Herman, Davis Renov Stahler Yeshiva High School for Boys, Woodmere, N.Y.
- Pranav Sivakumar, Illinois Mathematics and Science Academy, Aurora, Ill. and Paul Nebres, Illinois Mathematics and Science Academy, Aurora, Ill.
- Emily Sun, Park Tudor School, Indianapolis, Ind. and Jessica Mo, Carmel High School, Carmel, Ind.

### **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](http://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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