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Pittsburgh Regional Science & Engineering Fair sends three students to Reno

By Bill Zlatos
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Doctors wearing white coats may look professional and authoritative, but those frocks do not protect their patients from bacteria any better than scrubs or street clothes.

At least that's what Ariel Schroeder, a junior at St. Joseph High School in Natrona Heights, found as part of her project for the 70th Pittsburgh Regional Science & Engineering Fair. Her project was so good that she and two other students will represent Pittsburgh at the Intel International Science & Engineering Fair in Reno next month.

"It's going to be pretty cool to see kids from all over the world and the different things they've discovered or learned about from their projects," said Schroeder, 17, of Tarentum.

She used clothing samples of volunteers from UPMC St. Margaret and the Lawrenceville Family Health Center and a control sample of students and teachers from her school. She pressed a sterile garb dampened by saline onto the cuff and lapel of the clothing and then onto a medium for growing bacteria.

The results: "The study has shown if they wear white coats, they won't pass along any more bacteria than if they wore street clothes or scrubs," Schroeder said.

Joining her May 10-15 on the all-expenses-paid trip are Jennifer Butchart, a senior at Oil City High School, and Matthew Stoffregen, a senior from Woodland Hills High School.

They were among 1,000 students from more than 100 schools in the area who competed last weekend in the regional fair at the Carnegie Science Center.

They will rub shoulders with Nobel laureates next month and compete against 1,500 young science stars from more than 50 countries for nearly \$4 million in scholarships and prizes.

"I'm pretty excited about it, I guess, but nervous, naturally," said Stoffregen, 18, of Edgewood. "Nervous because the competition is more intense."

He entered the local competition with his project "Edros's Conjecture," which offered a solution to a mathematical statement dealing with prime numbers first posed by Hungarian mathematician Paul Edros.

"The mathematician who interviewed Matthew thought he was on to a new mathematical theory," said Lisa Kosick, director of the regional fair for the Science Center.

But all three contestants in the international contest share one trait, she said.

"Their ability to communicate their research was one of the biggest advantages they had," Kosick said.

Stoffregen, who will enroll at the University of Chicago this fall, said the local competition will be good preparation for the international contest.

"It helps you to explain something complicated in a short period of time," he said. "If you can do that in five minutes, you definitely know your topic well."

Butchart, 17, of Oil City used her research on T Tauri, or "baby stars," at the Kitt Peak National Observatory in Tucson for the regional fair.

Her project, "Identifying T Tauri Stars Using Small-Scale Optical Telescopes," allows scientists to identify the younger stars by analyzing images and plotting differences in intensity rather than using more elaborate telescopes.

"It's an inexpensive way to identify T Tauri stars," the future University of Pittsburgh student said.

Bill Zlatos can be reached at bzlatos@tribweb.com or 412-320-7828.

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