Regional science fair participants honored at SUNY Broome

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The development of cancer vaccines. A new way to transport donor organs – potentially expanding their availability. The influence of color on memory.

Those are just a few of the topics explored by young researchers in this year's Dr. Nelson Ying Tri Region Science and Engineering Fair, known as TRSEF. For the middle and high school students who compete, Ying TRSEF is the equivalent of the Olympic trials in the science fair world – as well as a chance to put their science knowledge to work, according to director Mary Eileen Wood.



Congressman Richard Hanna and Ying TRSEF participants

Students who participated in the fair recently paid a visit to the SUNY Broome campus, where they received a Congressional Commendation from Congressman Richard Hanna. Also receiving awards were SUNY Broome Professors Jen Musa and Phyllis O'Donnell for their involvement in the science fair.



Congressman Richard Hanna and SUNY Broome Professors Jen Musa and Phyllis O'Donnell

"Whatever your interests are, there is a place for you in the world if you are at the top of your game," Hanna, who co-chairs the House's STEM Education Caucus and attended the same college as Steve Jobs, told the students. "Be proud to be different. Be proud to know more, understand more and try harder, and you will be rewarded."

As he shook the students' hands, Hanna chatted with them about their projects – and cracked a few jokes. Windsor Middle School seventh-grader Ian Shaffer's project on decibel reduction? "You should come to Congress."

Union-Endicott High School student Jacob Pylypciw explained the topic of his presentation, "A Brief History and Current Applications of 3-D in Bioprinting," as a "3-D printer for your body, pretty much." Windsor High School student Tyler Mucci's project on a solar furnace won multiple awards – including a Ying Scholarship and advancement to the Genius Olympiad – as well as an admiring quip from Hanna: "A laser? That puts you in there with Star Wars."



Congressman Richard Hanna and Windsor's Tyler Mucci

Megan Breen, an incoming junior at Union-Endicott High School, studied the impact of the Transmedics Organ Care System. The new technology keeps donor hearts in a beating state, allowing for more than 10 hours of transportation time – twice as long as current technologies, a factor that could save more lives. During the course of her research, she had the opportunity to speak with Dr. Waleed Hassanein, who developed the system.

Why did she choose her project? "I want to be a doctor and I'm really into new technologies," she explained.

Congressman Richard Hanna and Union-Endicott's Megan Breen

Union-Endicott classmates Jason Lin and Sean Sinchi, both incoming seniors, also explored a life-saving technology: cancer vaccines.

"It's basically allowing your own immune system to detect these cancer cells," Lin said.

Both students have seen family members battle the disease and wanted to aid the fight against cancer, they said.

SUNY Broome Vice President for Student & Economic Development Debbie Morello and Associate Vice President and Dean of STEM Kelli Ligeikis both encouraged students to follow their love of science. Morello noted that she came to the SUNY Broome campus for the first time 50 years ago while participating in a science fair. (Her project focused on crystallization.)

"There are so many careers in science and in engineering, technology and math," said Ligeikis, who is also a professional engineer. "Go with your passion and enjoy everything you're doing because it's a really great field."

Associate Vice President and Dean of STEM Kelli Ligeikis speaks to science fair participants.

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This is the last year for the Ying TRSEF; Wood is retiring as director in September, and students will compete at different regional fairs from now on. Students from Broome, Chenango, Jefferson, St. Lawrence, Tioga and Tompkins counties will head to CNYSEF, while Herkimer, Lewis and Otsego counties will be covered by UCRSF and Delaware and Sullivan counties by WESEF.

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Wherever they head – whether in science fairs, college or career – Hanna encouraged students to take a look at the merits of their home state.

"There's a lot of opportunities right here. Whatever you do, try to do it here," he said. "New York is still a great place."

Left to right: Union-Endicott students Jacob Pylypciw, Jason Lin, Sean Sinchi and Colin Stockdale

Click here for a complete list of student winners and their projects:

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