

# Students get first-hand experience at Ag Lab

By Jennifer Freeman

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Tim Nguyen, the valedictorian of this year's graduating class at East Peoria Community High School, said when his teacher, Lin Westler, told them about a new program at the USDA ARS National Center for Agricultural Utilization Research (better known as the "Ag Lab") for student researchers, most students thought it was just about "learning different ways to plant and grow corn."

But Lindsey Semonksi, a sophomore at EPCHS, knew right away this program was for her.

"I want to either be a marine biologist or go into environmental studies," Semonksi said, adding, "I asked for an application and filled it out the day our teacher told us about the program at the Ag Lab."

This was the first year of the Peoria Ag Lab's Student Researcher Program, which offers 10th-, 11th- and 12th-grade high school students from Peoria, Tazewell and Woodford counties the opportunity to work with scientists in the lab for a day.

Nguyen and Semonksi were



Courtesy of Danielle Sapp

**Science students:** Pictured from the left is Lindsey Semonksi of East Peoria Community High School, Grace Figger of Manual High School, Marshall Mooberry of Peoria Christian School and Dr. Ken Bischoff.

among 29 students chosen to participate in the program. They spent April 28 at the Ag Lab working with scientists and learned firsthand there was more to the Ag Lab than "just corn."

The goal of the program is to identify students with a keen interest in science and provide them with a day of hands-on experience in a working research environment.

In a statement released by the Ag Lab, Dr. Paul Sebesta, the NCAUR director, said, "Everyone at this lab recognizes the importance of nurturing the next generation of scientists. We are here, we are part of this regional community, and we want to play an active role in that process. It is critically important to the future vitality of our country to invest effort in these upcoming scientists and inventors."

Students were chosen based on a combination of high school grade records, a submitted essay of why the individual wanted the opportunity and a science teacher recommendation.

"Lindsey and Tim both expressed a strong interest in science and a desire to experience science beyond the classroom, and they both had outstanding teacher recommendations," Kate O'Hara, an NCAUR communication officer and coordinator of the program, said.

Westler, a science teacher at EPCHS, had Nguyen and Semonksi as students in her physiology classes this year. She recommended both of them for the program.

"Tim and Lindsey are incredibly intelligent, hard-working and caring people who have a love of science," Westler said, adding, "It is so thrilling to see them doing things such as this that will help them fulfill their potential."

Westler said both Nguyen and Semonksi came to class the day after their time in the lab excited to tell everyone about their experience.

"When we got there, the

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scientists all introduced themselves and talked to us about what they do. They split us into groups of four and we rotated to different scientists and did different experiments with each. In total, we did four experiments throughout the day," Nguyen said.

The first lab experiment Nguyen conducted was testing a product called soy-screen, a sunscreen made out of soy that would also act as a detoxifier for the body because it contains antibiotics.

The soy-screen is still in the experimental phase because, as Nguyen explained, "There's a certain point where our skin cells would burst because it also has a negative effect. We were trying to find that point on a bacteria cell."

Nguyen, who will attend the University of Illinois this fall to study biochemistry and who also plans to go to medi-

cal school after earning his bachelor's degree, said, "My favorite of the four labs was one where we transferred DNA into bacteria to see how they make antibiotics and certain medicines. That really had a lot to do with what I am going to do in my college career and after."

Semonksi's small group was on a different track and they worked with four different researchers.

"My favorite lab was experimenting with which pheromones affected lesser mealworm beetles the most," Semonksi said. "Allard Cossé was the researcher for that lab, and you could tell he really loves what he does and he was so excited to see us taking an interest in his work."

Semonksi and Nguyen said they were really impressed with the program.

"In the beginning, they kept saying, 'This is our first year doing this program, we don't really know how it's going

to go,' but everything was extremely well-organized. Everything we did during the day was really relevant to their goal: to raise awareness of what they do and give us hands-on experience," Nguyen said.

"I think it would be a great thing for anyone to do just to see how a lab works and to see if it's something they would be interested in doing themselves," Semonksi said.

According to Semonksi, the day was a learning experience not only for the students, but also for some of the researchers.

"One of the scientists we worked with told us she was kind of afraid of having teenagers in her lab since she didn't have any kids herself," Semonksi said. "But everything went fine."

Nguyen said it was particularly a great experience for him because it gave him a taste of what it will be like working in a real lab in college.

"They didn't hold our hands

at all. They treated us like colleagues. They gave us a list of objectives and just let us do the experiments ourselves. I think it really mimicked a college lab in that way," Nguyen said.

Sebesta said their first student researcher day was a success.

"It was a fantastic day. The researchers had a great time working with the students. They really appreciated the excitement in the students' eyes. I heard very good feedback from both the scientists who worked with the students and the students themselves. I was really happy with how it went, and we are looking forward to continuing and expanding the program," Sebesta said.

The Ag Lab plans to host a group of students once a semester from now on, and O'Hara is in the process of developing a similar program for area science teachers so they can learn about the lab and bring the knowledge back to their students.