

## **NIEHS visits classrooms of STaRS teachers**

*By Kelly Lenox*

Two participants in the successful Science, Teachers, and Research Summer (STaRS) Institute received classroom visits from NIEHS staff, most recently in December. During the two-week [program](#) for teachers in July, Huei-Chen Lao, of the NIEHS Office of Science Education and Diversity, offered to follow up with a co-teaching opportunity, to support the teachers as they shared with their students the knowledge and experiences they gained in the program.

### **Nash-Rocky Mount Early College High School**

Lao traveled Oct. 10 with trainee Eric Milliman, Ph.D., and biologist Kevin Trotter, both of the Epigenetics and Stem Cell Biology Laboratory, to Brandi Simonof's sophomore biology class at Nash-Rocky Mount Early College High School. They taught students about population genetics and polymerase chain reactions. In addition, Milliman and Trotter brought equipment and materials so students could carry out polymerase chain reactions on cheek swabs, to test for the presence of a certain DNA sequence.

"We brought a project that would introduce a new concept to the students and provide good hands-on experience," said Lao. Conveniently, the time required for the reactions to run provided an opportunity for students to grill the visitors about careers in science, the specifics of their jobs, and what types of training are necessary. "This is a more rural environment, so they don't see a lot of scientists from day to day," said Lao. "They were really curious about what the work is like."

Lao emphasized to the students that an institute like NIEHS needs people with many different skills, from laboratory instrument maintenance, to animal care, to bench research. "We need people with all different talents, who can work together to get the job done," she told the students.

### **Athens Drive High School, Raleigh**

Travis Seese, who teaches Advance Placement biology at Athens Drive High School in Raleigh, North Carolina, also requested a co-teaching experience. On Dec. 10, Bob Petrovich, Ph.D., head of the NIEHS Protein Expression Core Laboratory, came along with Lao and led the research experience.

Again, the students were full of questions on topics such as personalized medicine and genetically modified organisms. But most of all, they were interested in how to prepare for a career in science. "How do you know when you know enough to be a scientist?" a student asked. "We never know enough," Petrovich answered. "That's why we never stop learning, and we collaborate with others when needed."

In addition to education and training, Lao emphasized the ability to give and receive critique as central to the collaborative nature of state-of-the-art research.

"I think the best part was the exposure to people who do science on a daily basis," said Lao. Students also expressed interest in the NIEHS summer internship program, which provides an opportunity gain practical experience.

Lao is planning additional co-teaching engagements in the coming year, and the STARS Institute will run again in the summer of 2015.



*Petrovich was actively involved in the summer program at NIEHS, shown above instructing teachers prior to a lab session. (Photo courtesy of Steve McCaw)*



*Trotter helped set up NIEHS equipment for students to use during the class. (Photo courtesy of Huei-Chen Lao)*



*Milliman guided a student as she prepared her sample for the polymerase chain reaction experiment. (Photo courtesy of Huei-Chen Lao)*



*Standing, from left, Milliman, Simonof, and Lao provided a highly interactive experience for Simonof's biology students. (Photo courtesy of Huei-Chen Lao)*

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