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Many students spend summer at camp or the pool. Not Liz Enyenihi – now a 15-year-old sophomore at Farragut High School outside Knoxville, TN. She spent her summer working eight-hour days in the laboratory of Jefferson’s Director of Surgical Research, Jonathan R. Brody, PhD, and living in a University of Pennsylvania dormitory.

Enyenihi is part of the Physician Scientist Training Program (PSTP) offered by the Distance Learning Center – a nonprofit organization dedicated to developing and supporting the next generation of minority students in science, technology, engineering, and math. The PSTP supports a national pool of minority child prodigies across a 10-year regimen (typically from seventh grade through the college senior year). With a multi-institutional approach, the program rotates these “whiz kids” through basic science labs in academia, the National Institutes of Health (NIH), and the pharmaceutical industry.

Enyenihi joined the program after eighth grade and spent the summer of 2012 at Southern Methodist University, where she took science courses and classes about research writing, giving presentations, and statistics. The goal: to prepare her to work in a real lab. According to the Jefferson scientists she worked alongside, Enyenihi was indeed well prepared to jump in and participate. During her time in Philadelphia, she worked on DNA subcloning using polymerase chain reaction (PCR) to amplify DNA.

“I also did a lot of DNA sequencing in order to subclone a piece of mutant DNA,” Enyenihi says. “By sequencing DNA, we were trying to identify a mutation.” She notes that she also had a chance to perform gel electrophoresis – a technique used to separate DNA based on its size. “Before the summer, I’d learned about gel electrophoresis, but I had never actually done it – or used the centrifuge, microcentrifuge, and incubators,” she says. “It was scary at first, but it all went well.”

She adds that she was pleasantly surprised by the autonomy she enjoyed during the program: “Although I received a great deal of support from Dr. Brody and his team, no one from PSTP was looking over my shoulder,” she recalls. “Only at the end – when I delivered my presentation, abstract, paper, and poster – did they see what I had gained from the experience.”

"It was great to have a front-row seat to Liz’s development into a young scientist during the summer... she came away with an ‘I can really do this or anything’ type attitude, which is what makes this program so special to be a part of.” Enyenihi demonstrated a great deal of knowledge and perseverance in the lab, and despite being a self-described “shy person,” she also excelled at presenting her key findings. She delivered the presentation twice – once to more than 40 PSTP staff and students in a large University of Pennsylvania lecture hall and again to the laboratory faculty and staff at Jefferson. She received top marks for her PSTP talk and left her Jefferson mentor and co-workers equally impressed.

"It was great to have a front-row seat to Liz’s development into a young scientist during the summer,” says Dr. Brody. “I think she came away with an ‘I can really do this or anything’ type attitude, which is what makes this program so special to be a part of.’ He will have the chance to work with Enyenihi again, as she returns to his laboratory next summer.

Though she’s long planned to become a physician, Enyenihi says her summer in Philadelphia exposed her to a new world: the life of a scientist. "Until this experience, I never really understood what a scientist does. I had only learned about it in class and in textbooks. I really enjoyed doing the work in the lab, and now I’m considering an MD-PhD program,” she concludes – adding that she hasn’t made a final decision. (That can wait until she’s at least 16!)