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Bio-Tech Camp Gives Students Insight into Science Careers

By Jennifer Wake



Bio-Tech Science Summer Camp students (left to right): Karen Schussman, Sarah Tomas, Melinda Schneider, Samantha Chang, Ashley Wong and Valerie Su Photo Jennifer Wake

While many Lamorinda teens spent the week after the 4th of July lounging by the pool or heading to the beach, 58 students from high schools throughout Contra Costa County sat in lecture halls and visited local scientific research facilities learning about topics including cloning, forensics, stem cells, and disease detection and control. The 6th Annual Bio-Tech Summer Science Camp was made possible by a consortium of industry, high school and community college partners, including the Contra Costa County Office of Education, Contra Costa Community College District, CSUEB - Concord Campus, and the Contra Costa Economic Partnership. The camp was taught by industry leaders, scientists, and local high school science teachers to high school juniors and seniors exploring careers in biotechnology.

The camp gave students a real-world glimpse into sciences often glamorized on TV.

Campolindo student Melinda Schneider - one of 13 Lamorinda students who attended the camp - said the forensics lecturer (Senior Criminalist Carolyn Weigand from the Department of Justice Richmond Lab's Missing Persons DNA Program) thought the TV show CSI, although not

always completely accurate, was a good hook to get people interested in the science.

"The actual science is not like CSI," added Acalanes High School junior Samantha Chang. Lectures offered students a glimpse into the real-life world of forensics and crime scene investigation, explaining the intricacies of the sciences and how they are utilized in criminal investigations.

"The forensics lectures took the idea of CSI and made it seem really interesting," Campolindo student Ashley Wong said. "I didn't think it related to biotechnology, but it's definitely the science involving crime."

For Sarah Tomas, who also attends Campo, the first day's lecture about human cloning was the most interesting topic since it's something that could happen in the near future. When asked about the ongoing ethical debate regarding human cloning, Tomas said, "If it's used for medical purposes, I don't find anything wrong with it."

For others, like Schneider and Acalanes student Adrian Chow-Danel, the stem cell lecture was the most intriguing. Science Associate Zachary Scheiner, Ph.D., of the California Institute for Regenerative Medicine, discussed how scientists remove embryonic stem cells, the therapies stem cells are used for, and explained current clinical trials. "I always wanted to go into this field and today's lecture confirmed my goal," Schneider said.

Following the lectures, students were given questions as a way to review what they had just learned and to journal their experience. In addition to lectures, students were able to visit different research facilities in the local area, including the Joint Genome Institute, John Muir Health and the Mt. Diablo Adult Education Surgical Technician Program.

During the trip to the Mt. Diablo facility, technicians performed a mock surgery on a dummy patient. "We had a lot of hands-on work, and learned the importance of sterilization of masks, gowns and surgical instruments," said Miramonte student Valerie Su, who wants to pursue a career in the medical field.

The week-long camp ended with students debating different issues, including cloning and genetic screening for healthcare in women.

Karen Schussman, who attends Bentley and has always been interested in neuroscience, was assigned the genetic screening topic, and was debating the con side. "Looking forward, this could create discrimination issues," she said. "It might create a separate class system for us. If someone had less fortunate DNA, their healthcare costs could go way up. Also, to have everything out there would lend to identity theft and a lack of privacy."

As for the camp, Schussman said, "This was all new territory. I wasn't sure what to expect."

Reach the reporter at: jennifer@lamorindaweekly.com

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