

# JCCC fills bioscience pipeline

**If the goal** of the first-ever pre-college bioscience institute June 15-18 was to interest high school students in the field, it worked.

“This class has been really cool. I love the lab with the new machines and enough equipment for everybody to use,” said Hannah Denomy, St. Thomas Aquinas student, Gardner, talking about JCCC’s state-of-the-art biotechnology suite in the Regnier Center.

“It’s fun. I’ve never done any of these experiments before. The day goes so fast,” said Blue Valley West High School freshman Alex Dunn, Leawood.

JCCC, in partnership with the OneKC WIRED Grant, offered the free institute taught by JCCC faculty with aides from the Shawnee Mission West High School Biotechnology Signature Program.

Students enthusiastically talked about their hands-on training in basic laboratory techniques learning how to use a micropipette, isolate their own DNA, examine bacteria under a microscope, modify the genetic makeup of bacteria using jellyfish protein in a green fluorescent color, search for the secrets of the rain forest, take bacteria samples from around campus and identify a criminal through DNA taken at a crime scene.

When asked what she would tell other high school students considering the class, Blue Valley West High School freshman Abbey Bingham, Overland Park, said, “I’d say: just do it.”

“Instead of being home this week in the summer, it was an opportunity to learn to use some lab equipment,” agreed Malika Singh, Blue Valley Northwest High School, Overland Park.

According to Dr. Luanne Wolfgram, chair, biotechnology, the pre-college institute is one of several workshops designed to introduce people to biosciences.

“We are doing everything we can to put people into the bioscience pipeline, whether it is high school and middle school students into college science courses, JCCC students into the bioscience industry workforce or four-year degree and displaced workers into production-type jobs in biomanufacturing,” Wolfgram said. “We want to help people become science professionals – whatever that may be.”

Two high school teacher workshops, a parent/high school student workshop, and two public workforce agency courses also are being funded by the grant. The parent/high school student workshop is scheduled for Oct. 15-17.

In April, the OneKC WIRED grant allowed 12 unemployed workers to be trained in manufacturing and production jobs



Hannah Denomy works on a chromatography experiment.

in a month-long *Introduction to Biomanufacturing* course, designed to train people in production jobs in the biosciences. A second course is scheduled for fall. Participants must have a high school degree and apply through state unemployment agencies – Workforce Partnership in Kansas or Full Employment Council in Missouri.

Wolfgram explains that these jobs can be anything from production of vaccines, animal cell cultures or agar plates to their packaging and mailing. Participants are trained to follow standard operating procedures in an industry highly regulated by the U.S. Food and Drug Administration, Environmental Protection Agency and Department of Agriculture. The class was developed in close collaboration among JCCC, University of Kansas, and industry and state agencies.

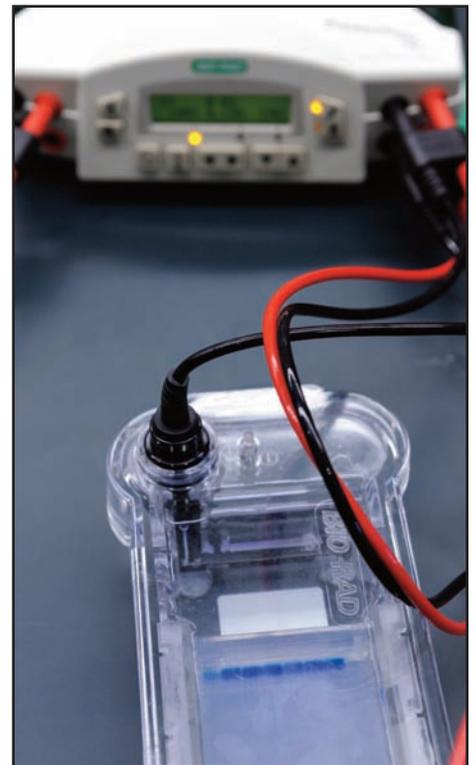
The Kansas Bioscience Initiative, signed into law in 2004, and the Johnson County Education and Research Triangle, approved by county voters in November 2008, significantly heightens the need for skilled workers in universities, medical centers, private research institutions and a variety of human and animal industries. For more information about JCCC’s bioscience program, contact Wolfgram at 913-469-2365, [wolfgra@jccc.edu](mailto:wolfgra@jccc.edu). 



Dr. Elynn Mulcahy, assistant professor, science, stands at the front of class to explain chromatography.



Brianna Parker, Jessica Ann and Malika Singh check their DNA results.



An electrophoresis apparatus is used to separate molecules, like DNA or protein, according to their size and charge.