

E. coli To Excellence

The safety of food consumed is important for today's people. American agriculture faces the scrutiny of the media at any point society feels the food is unsafe. Two undergraduate students at Texas Tech University majoring in Food Science and Technology, are working to improve food safety, all while pursuing excellence.

Graysen Ortega, a senior Food Science major and Ashleigh Willems, a senior Food Science major both have a mission to become more familiar with different strands of E. coli that could possibly surface in food products.

Every year the Institute of Food Technologist holds an undergraduate research contest. The students conduct a project, write a summary and submit it for the judges. It is an undergraduate competition open to any student conducting food science research in any place in the world.

If the student's project is chosen, the student goes to the conference during the summer and presents their project to a panel of judges. This past year there were more contestants as they have ever had, with 30 entries.

The top 6 finalists are allowed to compete at the annual meeting by presenting both a poster and giving an oral research presentation. Additionally, they are subjected to intense questioning from the judges before final placing are awarded.

The project Ortega submitted for the contest involved testing a machine for accuracy in detecting E. coli when prevalent in a

sample. This is going to help him in the future with his second project of finding the other strands of E. coli in the food system because he can create the best protocol for his testing.


"It helps explain other steps along the way because I know how this machine works," Ortega said. "I know what its detection is."

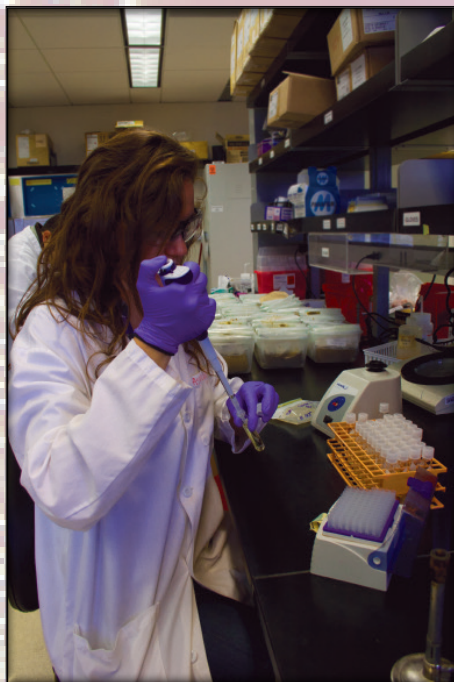
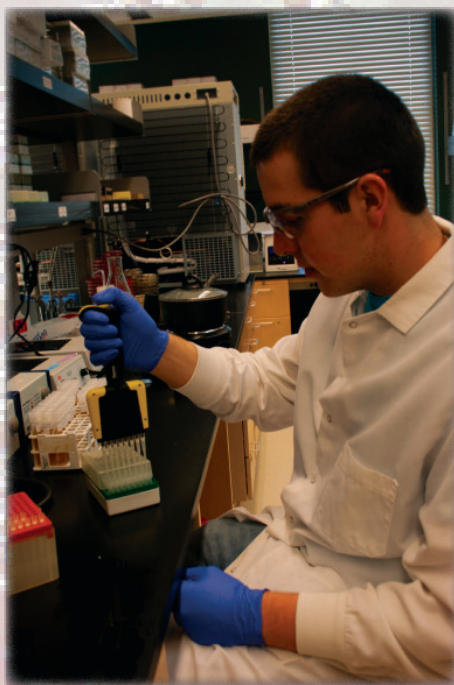
The machine he is using for his projects takes split strands of DNA and mixes them with the DNA of the E. coli he is looking for to pair it with Willems project is testing the heating death times of E. coli to find a better process in heating E. coli to eliminate the bacteria from food.

"E. coli reacts differently if it's in food, if it's in broth and depending what it's in," Willems said. "So I did a baseline and I heated broth and studied a laboratory broth."

Willems said her research and her paper will be one of the first papers to ever be written on this topic. As she was doing her research for her topic she only found one other experiment that had been done and it was conducted with apple juice.

Mindy Brashears, a food science professor, said it is an honor to have her students place nationally.

"One of the most exciting parts of my job as a faculty member is to see the students succeed," Brashears said. "To have them recognized on a national level for their hard work is very exciting as it gives them recognition for a job well done and brings notoriety and recognition to our program at Texas Tech." 



Andrea Nardoni
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