



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Robert D. Huang	Project Number S1312
Project Title The Detection of Bacteria Resistant to Ampicillin and Kanamycin in Meat at Tracy Supermarkets	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this experiment is to determine if the low levels of antibiotics fed to livestock leads to the presence of antibiotic-resistant bacteria in supermarket meat.</p> <p>Methods/Materials Beef, chicken, and pork were obtained from two local supermarkets. The liquid juices found within the containers of those meats were streak plated onto LB agar plates, LB agar plates with ampicillin, and LB agar plates with kanamycin. The plates were allowed to sit untouched for 48 hours (in order to allow bacteria to grow). All bacteria found to be resistant to one type of antibiotic were cross-plated onto a plate with the other type of antibiotic.</p> <p>Results The chicken from the Tracy Safeway and the pork from the Tracy Albertsons displayed significant bacterial growth. The chicken had kanamycin-resistant bacteria and the pork had ampicillin-resistant bacteria present.</p> <p>Conclusions/Discussion A major cause of the proliferation of antibiotic-resistant bacteria is exposure of bacteria to weak levels of antibiotics. The presence of antibiotic-resistant bacteria in supermarket meat poses a potential health hazard and reveals the problems within the system of raising livestock. The results also underscore the need to reform the before mentioned system.</p>	
Summary Statement This project explores the potential creation of antibiotic-resistant bacteria when livestock are fed low levels of antibiotics.	
Help Received Mr. Kirk Brown oversaw the laboratory procedure and guided the creation of the presentation.	