



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <b>Stephanie Lee; Nolan Woo</b>	<b>Project Number</b> <b>S1308</b>
<b>Project Title</b> <b>To Be or Not to Be: The Story of Bacteria vs. Anti-bacterial Agents</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this project was to figure out which anti-bacterial agents were effective against both Staphylococcus aureus and Pseudomonas aeruginosa. We believe that all anti-bacterial agents will effectively eliminate Staphylococcus aureus, but not Pseudomonas aeruginosa because Pseudomonas aeruginosa is considered more toxic.</p> <p><b>Methods/Materials</b> We utilized safety materials such as gloves and lab coats to keep from contaminating our materials during our experimentation. The bacteria cultures that we used were lab samples of Staphylococcus aureus and Pseudomonas aeruginosa, of which we cultured our own samples into blood agar plates with cotton swabs and sterile saline. The anti-bacterial agents that we tested on the bacteria were Sani-Cloth Plus, Sani-Cloth, bleach solution, Lysol, and Sanimaster III. We also used additional materials such as a 200 <math>\mu</math>-liter pipette with sterile tips, VITEK Calorimeter, incubator, and refrigerator to conduct our experiment.</p> <p><b>Results</b> At the end of our experiment, some bacteria still remained after we added certain anti-bacterial agents such as the Sani-Cloth Plus, but the majority of the anti-bacterial substances was successful in eliminating bacterial growth for both types of bacteria.</p> <p><b>Conclusions/Discussion</b> We concluded that most of our anti-bacterial agents are able to fight off these two types of bacteria because in our experiment, all but one of our anti-bacterial agents were at least 99.9% effective against both bacteria.</p>	
<b>Summary Statement</b> Our project is about discovering which anti-bacterial agents are more effective in eliminating two types of bacteria found in hospitals.	
<b>Help Received</b> We used the laboratory equipment in the microbiology lab at USC University Hospital under the supervision of Arthur Gali, the supervisor of the lab.	