



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Michaela J. Loomis	Project Number J1712
Project Title Ewww	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I wanted to learn more about the role that different generations of cephalosporin type antibiotics play in killing or preventing the growth of bacterial pathogens in the human body. The focus was on which generation of cephalosporin type antibiotic killed the most staphococoulus bacteria. I expected Cephadroxil, the first generation of cephalosporins, to kill the most staphylococcus bacteria.</p> <p>Methods/Materials Sterile swabs were applied to my nasal passages to obtain the staphylococcus bacteria. To determine the decrease of staphylococcus bacteria, I measured the diameter, in millimeters, of the area surrounding the antibiotics that was free of bacterial growth.</p> <p>Results I can do several continuations of my experiment. One would be doing the experiment over a longer period of time by taking samples two days apart; also staining the bacteria to see which is gram positive and which is gram negative. As well as using the generic vs. named brand of the second generation of cephalosporin antibiotics.</p> <p>Conclusions/Discussion My over all conclusion was that Cefuroxime, not Cephadroxil, kills the most staphylococcus bacteria in 10 days. Over the course of the experiment I saw a decrease of bacterial growth in the Cefuroxime petri dish. Of the three generations of cephalosporin, that were tested Cefuroxime killed the most staph. My test results can be beneficial to the scientific community because I confirmed that each generation of cephalosporin is different and they all kill different bacterial pathogens.</p>	
Summary Statement The cause and effect relationship between different generations of Cephalosporin type antibiotis and staph bacteria though administering antibiotics to an established staph bacteria coloney and measuring the results over a 5 day time period	
Help Received used lab equipment at Amador Valley Medical Center, under the supervision of Jessica Kemprud, RN, MSN, FNP; Mrs. Heather Small mentored me; Mother drove me where I needed to go	