



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Dhruv T. Amin	Project Number S1402
Project Title The Prevalence and Prevention of Methicillin-Resistant Staphylococcus aureus in High School Environments	
Objectives/Goals The objective of this experiment was two fold: to find the prevalence of Staphylococcus aureus and Methicillin-resistant Staphylococcus aureus (MRSA) in high school settings, and to test the ability of Clorox Disinfecting Wipes (CDW) to kill these bacteria.	
Abstract The prevalence was tested by sampling each area with a selective and differential medium, Mannitol Salt Agar (MSA), to find colonies of Staphylococcus aureus. Then, colonies were counted and transferred onto another medium, MSA with Oxacillin, and processed to assess the presumptive prevalence of Methicillin-resistant Staphylococcus aureus. After wiping the same surfaces with Clorox Disinfecting Wipes, samples were taken again and processed.	
Methods/Materials The prevalence was tested by sampling each area with a selective and differential medium, Mannitol Salt Agar (MSA), to find colonies of Staphylococcus aureus. Then, colonies were counted and transferred onto another medium, MSA with Oxacillin, and processed to assess the presumptive prevalence of Methicillin-resistant Staphylococcus aureus. After wiping the same surfaces with Clorox Disinfecting Wipes, samples were taken again and processed.	
Results In all four high school environments tested, Staphylococcus aureus was present and MRSA was presumptively present. The two locker rooms had a mean number of 72.55 Staphylococcus aureus colonies per plate and the two classrooms had a mean number of 10.15 Staphylococcus aureus colonies per plate. Out of 50 MSA with Oxacillin plates, 23 grew colonies presumptively positive for MRSA. The CDW were effective in killing the bacteria in all but one case.	
Conclusions/Discussion Methicillin-resistant Staphylococcus aureus (MRSA) is an emerging illness that affects healthy individuals and may have devastating consequences, including death. Staphylococcus aureus was present and MRSA was presumptively present in the various high school environments tested. The experiment proved that Clorox Disinfecting Wipes would be effective in controlling MRSA in high school settings.	
Summary Statement My project is about the prevalence and prevention of Methicillin-resistant Staphylococcus aureus in high school environments.	
Help Received I obtained lab materials and used lab equipment at the Clorox Technical Center in Pleasanton under the supervision of Dr. Ellen Jones.	