



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Meicheng Shi	Project Number J1332
Project Title What Keeps Vampires Away?	
Abstract Objectives/Goals The purpose of my experiment was to determine the effect of fresh garlic juice on various bacteria to see if the antiseptic property lessens if garlic juice has been subjected to boiling or freezing temperature for a given amount of time. If garlic has antiseptic power, then the effect will vary with the concentration of the garlic juice and the types of bacteria. If extreme temperatures affect the antiseptic power, then garlic juice that has been boiled or frozen will have less antiseptic power than garlic juice that has not been boiled or frozen. Methods/Materials . I tested the antiseptic power of fresh, boiled and frozen garlic on three different types of bacteria (E.coli, B.cereus, S.epidermis) and bread mold. I also tested the healing power of garlic with 100%, 50%, 20%, and 0% fresh garlic juice. The testing process required petri dishes, nutrient agar, the subcultured bacteria, a pipet, garlic juice, and an incubator. The nutrient agar was placed into the petri dishes, along with the subcultured bacteria. Then, plates soaked in garlic juice were put into the petri dishes. They were incubated for 48 hours, and then observed. The process was repeated the all the bacteria. Results The results showed that the garlic juice was most effective on B.cereus, and least effective on bread mold. Also, fresh garlic juice was much more effective than boiled or frozen juice, and boiled garlic cloves had no effect at all! Conclusions/Discussion My hypothesis proved correct. This experiment and its results are important to us because it shows us how a common household food can be used to heal. For example, if immediate treatment is needed for a scrape or cut, someone could simply apply garlic to the wound and that would kill the bacteria without need of more complicated medical treatment.	
Summary Statement The effect of fresh, boiled and frozen garlic juice on various bacteria and mold.	
Help Received Mr.Lee helped with experimentation and he got the bacteria. He also helped with analyzing the data.	