



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Rachel A. Smith	Project Number S1319
Project Title Effects of Curry and Other Common Foods on the Growth of Oral Bacteria	
Abstract Objectives/Goals The objective of the project was to examine if common household food items alter the growth of oral bacteria. Methods/Materials Human saliva was collected from different individuals and incubated with known amounts of different food items such as milk, cranberry juice, garlic, onion, rosemary and curry powder. After incubating, the treated saliva was plated on Luria broth plates and colony forming units were allowed to grow in an incubator. Colonies were counted and the results were compared to control saliva that had not been treated with any of the foods. Results The experiments clearly showed that foods had varying effects on the growth of oral bacteria. Some foods increased bacterial growth while others had a growth inhibitory effect. Curry powder had the most dramatic effect on bacterial growth. Saliva treated with curry powder showed a dramatic increase in the number and different types of bacteria. Further investigation showed that curry powders (3 different samples were tested) contained their own population of bacteria that grew rapidly on LB plates. Boiling the curry powders prior to testing with saliva removed the foreign bacteria. Saliva treated with pre-boiled curry powder still showed an increase in bacterial growth. Conclusions/Discussion The study showed that common food items can have a positive or negative effect on the growth of human oral bacteria. The study also demonstrated that some food items that we assume to be free of bacteria may contain high levels of microbes.	
Summary Statement The project examined how common food items affect the growth of oral bacteria.	
Help Received My father assisted me with my project design and helped me with some of the techniques.	