



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Salvador A. Pacach	Project Number J1421
Project Title The Effect of Capsaicin on Orally-Measured Body Temperature	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this project was to find out if capsaicin, the chemical responsible for the "burn" in spicy food, has any effect on orally measured body temperature. My hypothesis was that people who ate spicy food containing capsaicin would not experience a change in their orally-measured body temperature.</p> <p>Methods/Materials I asked 29 volunteers, both girls and boys in the age range of 11 to 14 years old, to eat 3 types of spicy food that contained capsaicin. I measured their body temperatures before and after they ate the spicy food, as well as for the control, which was plain yogurt.</p> <p>Results Out of 29 people who ate jalapeños, 8 people (28%) experienced a body temperature decrease, 17 people (58%) experienced a body temperature increase, and 4 people (14%) experienced no change in body temperature. Of the 28 people who ate a chile lollipop called vero rebanaditas, 1 person (4%) experienced a body temperature decrease and 27 people (96%) experienced a body temperature increase. Of the 28 people who ate Flamin' Hot Chester's Fries, 27 people (96%) experienced a body temperature increase and 1 person (4%) experienced no change in body temperature. For the control, plain yogurt, out of 29 people, 7 people (24%) experienced a body temperature decrease, 21 people (73%) experienced a body temperature increase, and only 1 person (3%) experienced no change in body temperature. This means that over 50% of my volunteers experienced an increase in body temperature as a result of eating foods that contain capsaicin.</p> <p>Conclusions/Discussion Overall, a majority of the volunteers in each food category experienced an increase in their body temperature, including the control group. The temperature increase in the control group might have happened because of the movement of the jaws while eating, and body movement, such as walking and moving around during the experiment. I would like to do this experiment again, but this time controlling the body movements of the volunteers so no extra heat is generated when doing the experiment.</p>	
Summary Statement The purpose of the project is to find out if capsaicin has an effect on orally-measured body temperature.	
Help Received My teacher, Mr. Simonsen, helped me a lot by editing my project.	