



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <b>Andrew R. Dunn-Rankin</b>	<b>Project Number</b> <b>J1412</b>
<b>Project Title</b> <b>Cooling the Heat of a Jalapeno</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to find out which edible substance cools the heat of an ingested jalapeno pepper the fastest. <b>Methods/Materials</b> A jalapeno pepper was cut into four equal slices and then eaten by the four participants. A stopwatch was started, and we ate or drank the test substance. I tested water, whole milk, nonfat milk, bread, a lemon/sugar paste, and no substance. Once the participant felt no more heat in his/her mouth, the time was recorded. This was repeated for each substance 3 times. <b>Results</b> Whole milk cooled the heat of the pepper the fastest, whereas water cooled it the slowest - slower than no substance at all. <b>Conclusions/Discussion</b> My conclusion is that whole milk cools the heat of a jalapeno the fastest. This is because dairy products contain casein, which breaks down capsaicin (the chemical that makes peppers hot). Also, capsaicin mixes well with fat, so whole milk worked the best.	
<b>Summary Statement</b> My project is about finding out which edible substance cools the heat of a jalapeno pepper the fastest.	
<b>Help Received</b> Mother, father, sister were test subjects; Mother helped with board.	