



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Rebecca G. Maglieri</b>	<b>Project Number</b> <b>J1603</b>
<b>Project Title</b> <b>Investigating the Inhibition Rate of Capsicum cultivars</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of my science experiment is to determine which Capsicum Cultivars solution will inhibit the most bacteria. The reason that I am doing this experiment is to find out if a pepper solution will prevent bacteria growth and may have some medicinal value. I would like to figure out which pepper is the most helpful in preventing bacteria growth. There are many herbs and homeopathic types of vitamins that are supposed to either cure illnesses or make a recovery quicker. I would like to find out if peppers are an effective aid in stopping bacteria growth and may be used to either prevent bacteria infections or help people to recover quickly.</p> <p><b>Methods/Materials</b> I plan to test 12 different peppers. After researching about the peppers and their health use, I will make a solution from the pepper and water. Using bacillus substillus, I will streak it on a Petri dish. Then I will measure 5 sections on each Petri dish. I will hole punch coffee filters and soak the filters in the pepper solution. After I soak the hole-punched coffee filters, I will place the filter pieces onto the sectioned Petri dishes. After 48 hours, I will measure the inhibition rate of the bacteria growth around each filter piece. I will have 20 trials for each pepper.</p> <p><b>Results</b> After completing my investigation on the inhibition rate of different Capsicum Cultivars, I was able to determine that a pepper's hotness doesn't directly affect the inhibition rate of the pepper. My hypothesis stated that the Cayenne chili pepper would have the greatest inhibition rate. The Cayenne pepper has a hotness of 30,000 to 50,000 and is considered to be a hot pepper on the Scoville scale. My hypothesis was incorrect. In fact the Chipotle had the greatest inhibition rate while the Pasilla had the least inhibition rate. The Chipotle and Pasilla are both mild peppers.</p> <p><b>Conclusions/Discussion</b> I have learned that the different varieties of Capsicum Cultivars have varying degrees of inhibition rates. I hypothesized that the inhibition capabilities were based on the degrees of hotness that the varieties possessed. What I found was that the mild peppers had a greater inhibition rate.</p>	
<b>Summary Statement</b> Testing the inhibition rate of culturally diverse peppers on bacteria growth.	
<b>Help Received</b> Mrs. Loflin helped edit final papers.	