



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Kisha G. Thayapran</b>	<b>Project Number</b> <b>J1728</b>
<b>Project Title</b> <b>I've Got Enough Milk! Leave Me Alone!</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My project was to determine if pasteurized supermarket milk is free of any bacterial contamination and also whether milk that comes from cows treated with rBST or milk free of rBST will increase bacterial growth.</p> <p><b>Methods/Materials</b> 6 different brands of commercially available supermarket milk was tested for any bacterial contamination. Milk samples were incubated in nutrient broth and subcultures in nutrient agar plates capable of growing Gram positive and Gram negative bacteria. E. Coli and Strep. Viridans were grown in milk and bacterial colony count was done using a nephelometer.</p> <p><b>Results</b> Ross and Valutime milk with rBST had the highest amount of bacterial growth, 5188.89 colony count/mL and 5000.00 colony count/mL respectively. Knudsen and Stater Bros had 2222.22 colony count/mL and 4444.44 colony count/mL respectively. Full Circle had 555.56 colony count/mL and Horizon had no growth. Bacterial growth was less in organic milk. E. Coli and Strep. Viridans were grown in four brands of milk. Valutime and Ross had the highest amount of growth, and they both had 3333.33 colony count/mL. The brands Full Circle and Horizon did not have rBST and both had 1477.77 colony count/mL.</p> <p><b>Conclusions/Discussion</b> My conclusion is that organic milk that is not from cows treated with rBST is relatively safe to drink for all age groups.</p>	
<b>Summary Statement</b> To determine if pasteurized milk free of any bacterial contamination and if milk with rBST or no rBST is safe to drink.	
<b>Help Received</b> My teacher, Mr. Harry Post, for correcting drafts, my parents for helping me with the board and buying the materials, used the microbiology lab at the Hemet Valley Medical Center under the supervision of Microbiologist Butch Aying.	