



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Samantha F. Perry</b>	<b>Project Number</b> <b>S1726</b>
<b>Project Title</b> <b>An Energized Mind</b>	
<b>Abstract</b> <b>Objectives/Goals</b> Are the effects that sports drinks have on one's body a placebo effect, or do they actually work to boost one's physical performance level? <b>Methods/Materials</b> To test this idea, I had people drink either water (control), sugarless lemonade (placebo) or Cytomax (sports drink) throughout three testing days, while they performed in four tests: The 800 meter run, a meter stick reaction time test, the long jump and an obstacle course. I used timing and measuring tools for the first three, and a variety of sports equipment for the last. Afterward, I asked the test subjects about their overall feeling throughout the testing day on a scale from one to ten. <b>Results</b> My results proved that the Cytomax sports drink works better than water and the placebo drink in the 800m, the obstacle course, the reaction time test, and the subjects' overall feeling. Even though the difference between all of the averages is miniscule, I can conclude that Cytomax actually works, and it is not just a placebo effect. <b>Conclusions/Discussion</b> Based on my data, my hypothesis was incorrect because I thought that Cytomax would be a placebo effect. It appears that Cytomax works, though. However, the limited data I gathered from the small sample size and trial numbers and other uncontrollable variables, such as the unreliability of people and weather, could have impeded the accuracy of my conclusion.	
<b>Summary Statement</b> To determine whether Cytomax, a sports drink, has a placebo effect on one's performance, I put test subjects through four physical tests, while having them drink water, placebo drink or Cytomax, and they subjectively rated their feelings.	
<b>Help Received</b> My parents, Elysa and Michael, helped me time the 800 meter run, work obstacle course stations and take pictures.	