



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

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Project Title Effects of a Pyruvate Glucose Cocktail	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals This experiment explores the ability of "performance boosting" drinks and coffee to improve a mouse's ability to run through a maze. Also the behavior of the mice is studied to see the effects of the various drugs on their daily activities.</p> <p>Methods/Materials Eight white lab mice(Mus musculus)are run through a maze after being administered a drug which may or may not affect their ability to traverse the maze. The mice are administered a calculated amount of the drug and also put through a trial 30 minutes after being administered the drug and 60 minutes after being administered the drug.</p> <p>Results The mice which were administered a drug performed better during the first five trials but following that their times began to drop. After the tenth trial the mice administered a drug began to have times which were worse in comparison to the standard when they usually were better. Behavioraly the mice appeared more alert and active at first but also experienced more aggression as the test continued with the males becoming especially aggressive.</p> <p>Conclusions/Discussion The data of this experiment has shown that "performance boosting" energy drinks and coffee both increase the mouse's ability to run through the maze at first but once consecutive trials are run the mice begin to lose that boost of time and end up becoming worse in the amount of time it takes to run through the maze. These drinks do not have the ability to boost performance past a certain point and should not be taken on a regular basis and maybe even at all because of the possible side effects. Although it cannot be said which specific area is being affected by the drink, whether in the brain or the muscles themselves and more study is needed. The males also showed a more aggressive attitude the longer the test went on but the females did not until the final two trials so a study should be performed on gender specifically as well.</p>	
Summary Statement Discovering the effects of "performance boosting" energy drinks and coffee on the ability of a mouse to transverse a maze.	
Help Received	