



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> <b>Joshua A. Lewis</b>	<b>Project Number</b> <b>J2105</b>
<b>Project Title</b> <b>Daphnia: Under the Influence</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To find whether certain substances affect the heart rate of Cladocera Daphnia.</p> <p><b>Methods/Materials</b> Water fleas, caffeine, alcohol, microscope.</p> <p>I added small amounts of alcohol to the container of Daphnia and then extracted them from the container after a minute with a pipet. I then put them under the microscope and counted their heartbeats for 15 minutes, then removed the Daphnia. I repeated this process multiple times to get a more accurate sample size. I repeated the process again multiple times, but with caffeine instead of alcohol.</p> <p><b>Results</b> When the Daphnia were introduced to caffeine, the more I gave them, the more their heart rate went down. The more alcohol I gave the Daphnia, the more their heart rate went down.</p>	
<b>Summary Statement</b> Testing whether caffeine and alcohol affect Cladocera Daphnia's heart rate.	
<b>Help Received</b> My mother helped time the experiments, and my dad bought the supplies. My math tutor helped me keep track of data.	