



**CALIFORNIA STATE SCIENCE FAIR  
2017 PROJECT SUMMARY**

<b>Name(s)</b> <b>Austin R. Gaines</b>	<b>Project Number</b> <b>S2306</b>
<b>Project Title</b> <b>The Miracle Herb Curcumin</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this study is to determine if the Tumeric root extract, Curcumin, can be used as an anti-oxidant and anti-inflammatory helping agent.</p> <p><b>Methods/Materials</b> Microscope, Curcumin, Daphnia magna, hydrogen peroxide, sodium chloride, distilled water. The Daphnia were placed into the two different oxidizing agents, hydrogen peroxide and sodium chloride. The daphnias' heart rates were then taken under a microscope at 100x. Immediately following this the Daphnia were given a constant solution of Curcumin to act as an anti-oxidant and anti-inflammatory. The Daphnia were then again tested under the microscope to determine the effectiveness of the Curcumin.</p> <p><b>Results</b> The Daphnia's heart rate dropped significantly and consistently in each possible solution when give the solution of Curcumin. The heart rate also remained constant with the control of distilled rather during the 8 minute tests. This identifies Curcumin as an anti-oxidative and anti-inflammatory healing agent.</p> <p><b>Conclusions/Discussion</b> Curcumin is an anti-oxidant and anti-inflammatory healing agent and should be researched further as a potential product to use in the medical field. The project data showed that Curcumin effectively lowered heart rates of Daphnia magna indicating it may be a valuable product for humans as well.</p>	
<b>Summary Statement</b> Curcumin can be used as an anti-inflammatory and anti-oxidant healing agent.	
<b>Help Received</b> I spoke with a naturopathic doctor about the product and its many uses.	