



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> Alexandra M. Maggiacomo	<b>Project Number</b> <b>J1723</b>
<b>Project Title</b> <b>Is There a Way to Repel Fruit Flies with Herbs?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The experiment was done to see if there is a natural way to repel fruit flies with herbs.</p> <p><b>Methods/Materials</b> Six fruit fly traps were created using 6 small glass containers, 6 12.2 mm slices of banana, 25.4 mm samples of 5 herbs (basil, lavender, mint, rosemary, thyme), fruit flies (<i>Drosophila melanogaster</i>), and plastic wrap. All banana slices were taken from the same banana and all herb samples were taken from the same plant. Each small container trap contained a piece of banana and an herb sample (the control contained banana only), then it was sealed with 2 pieces of plastic wrap. Four holes were punctured in each top to allow the flies to access the trap. The traps were then placed in a larger clear container, along with the fruit fly specimens which were gathered in a jar lid and positioned centrally. The large container was sealed with plastic wrap secured with the large rubber band. After 24 hours, preliminary research showed that any live flies would have dispersed to the various herb traps or large container bottom. The contents of the fruit fly traps were then submerged, and after a few hours, poured through coffee filters to separate them from the water. Banana and herb samples were also extracted. Fruit flies were counted from each trap by photographing the flattened coffee filters and flies with an iPad, then using a Paint program to indicate which flies were counted.</p> <p><b>Results</b> On average, lavender repelled fruit flies better than everything else (attracting only 7.7% of total fruit flies released), followed by the banana control at 9.1%. The other herbs -- basil (24.3%), mint (13.1%), rosemary (18.2%), and thyme (11.6%), -- actually seemed to attract more of the fruit flies released than the control.</p> <p><b>Conclusions/Discussion</b> My hypothesis was that lavender would repel fruit flies more effectively than the other 4 herbs (basil, mint, thyme and rosemary) and control sample was strongly supported by the results.  One project related to this one could be 'Which fruits attract fruit flies more than others?' By repeating this experiment with a different fruit we might get an idea if the type of fruit affects the herbs' effectiveness in repelling the flies, or how different fruits attract flies as compared to a banana.</p>	
<b>Summary Statement</b> This experiment was performed to see if there was a natural way to repel fruit flies using herbs, testing basil, lavender, mint, rosemary and thyme versus a control sample.	
<b>Help Received</b> My mother helped proof the board and photograph me as I did the experiment.	