



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>Gabriel M. Ares</b>	<b>Project Number</b> <b>J1706</b>
<b>Project Title</b> <b>Wolbachia vs. Spiroplasma</b>	
<b>Abstract</b> <b>Objectives/Goals</b> I did my research project on Wolbachia and Spiroplasma. These two Bacteria infect many insect species are and are passed down from generation to generation through ovaries. My investigative question was; does Wolbachia affect the infection rate of Spiroplasma? <b>Methods/Materials</b> I went to Big Sur and capture fruit flies from several locations. I established 38 inbred lines from individual females, and used polymerase chain reaction (PCR) to see whether each line was infected with Wolbachia or Spiroplasma or both. <b>Results</b> We found Spiroplasma infection = 0. Due to this, my hypothesis couldn't really be tested and my results are inconclusive. My data did show the approximate infection rate for Wolbachia and Spiroplasma when infection > 0. The infection rate for Wolbachia is around 62.5% and Spiroplasma is almost certainly less than 9% but more probably less than 2.5%. <b>Conclusions/Discussion</b> My Hypothesis stated that there would be a change in the rate of Spiroplasma if the flies carried Wolbachia. Unfortunately, my results said my Null, there would be no change, was supported.	
<b>Summary Statement</b> I was trying to see if the presence of Wolbachia affects the infection rate of spiroplasma (a mycoplasma, tiny bacteria that live in fruit fly blood	
<b>Help Received</b> Used lab equipment at UCSC under the supervision of doctors Sullivan and Ares, Justin Crest and Catharina Lindley helped with procedures, Haller ige helped glue the board	