



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Brian Coffey	Project Number J1601
Project Title Differences in Minimum Inhibitory Concentrations of Metalaxyl in Phytophthora	
Abstract Objectives/Goals The purpose of this project is to determine the minimal inhibitory concentrations of the fungicide Metalaxyl in various strains of fungus-like Phytophthora (Kingdom Chromalveolata). Methods/Materials I used (11) strains of Phytophthora palmivora (which causes fruit rot in coconuts and betel nuts) with V-8 juice as a growth media. Different concentrations of Metalaxyl in PPMs were used and its effectiveness in growth of cultures was observed. Results I found that there were significant differences between the strains. The MIC for six of the eleven isolates was 1 PPM. Five of the isolates were not inhibited by Metalaxyl. Conclusions/Discussion Approximately 45% of the isolated strains of Phytophthora palmivora were not inhibited by Metalaxyl, while the other 55% were at concentrations of 1 PPM. This is significant in that given an even population distribution of these strains, the use of Metalaxyl would have to be very strain specific: a difficult task in field application.	
Summary Statement The purpose of this microbiology project is to determine the minimal inhibitory concentrations of Metalaxyl in various strains of Phytophthora.	
Help Received I was able to obtain strains of Phytophthora from the repository at UC Riverside and perform the experiment under a student immersion program in the labs at my own direction.	