



CALIFORNIA STATE SCIENCE FAIR

2013 PROJECT SUMMARY

Name(s) Ai Enkoji	Project Number S1910
Project Title Mold As a Potential Biological Control for Wisteria	
Objectives/Goals Mold found on the scarlet wisteria (<i>Sesbania Punicea</i>) at Scout Island was seen to be weakening and killing off the wisteria without any visible effect to any adjacent or surrounding plants. The objective of this experiment was to determine whether that mold alone has the potential to be a biological control for scarlet wisteria and to identify what the mold is doing to the wisteria to cause it to weaken and die.	Abstract 15 scarlet wisteria plants were grown from the collected seed pods (sterilized via bleach). The wisteria were separated into 3 groups of 5. Group 1 was the control group, Group 2 was the variable group, and Group 3 was a reserve group for use by the reisolated mold from Group 2 (Koch's postulates). The mold was topically applied to the leaves of the variable group with sterile swabs. Two of the variable group plants are placed next to four different plants other than wisteria as well as one of the control wisteria to determine if the mold can spread to adjacent plants. Plants were observed every day for changes.
Results All wisteria in the variable group showed signs of weakening and yellowing or falling of the leaves, but the control group remained healthy. All adjacent plants to the variable group showed no signs that the mold had spread to them.	
Conclusions/Discussion The mold was deduced to be capnodium which is spread by plant-sucking insects that leave honeydew on leaves. This experiment made sure no other factors such as plant sucking insects could be involved. This may explain why the mold could not grow as widely or spread to other plants. Regardless, I was able to find substantial evidence that the mold can potentially be a biological control for scarlet wisteria.	
Summary Statement A mold found to be killing scarlet wisteria at Scout Island was applied topically to new wisteria plants to determine if it alone could potentially be a biological control for scarlet wisteria.	
Help Received Scout Island naturalist Conrad Bitters allowed access to the scarlet wisteria plants and mold and provided background on the scarlet wisteria. Mrs. Rebecca Avants (biology teacher) provided lab equipment, supplies, and facilities as well as advice on handling the mold and growing the wisteria plants.	