CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY

Name(s)
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Project Number
J0407

Project Title
Plant Genetic Function Study through Virus Induced Gene Silencing

Abstract

Objectives/Goals
To determine if it is possible to dysfunction a gene through gene silencing, or in our case virus induced gene silencing. We believe that gene silencing will occur.

Methods/Materials
Using gloves and syringes, two Nicotiana benthamiana plants were inoculated with an agrobacterium which contained the Tobacco Rattle Virus. This virus contained the gene fragment Pds.

Results
In the plants that were previously inoculated, the gene fragment Pds silenced the host gene. This was expressed in the host plant as a photo-bleached phenotype. Our hypothesis was correct. Virus induced gene silencing occurred.

Conclusions/Discussion
Virus induced gene silencing was evident by the expression of a photo-bleached phenotype. The host gene was silenced. Our hypothesis was correct.

Summary Statement
Our project is about Virus Induced Gene Silencing and how it can be applied in the real world.

Help Received
Dr. Jin allowed us the use of her laboratory and tools