



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Shiraz Ghanimian</b>	<b>Project Number</b> <b>S1407</b>
<b>Project Title</b> <b>Effects of Air Pollution on Freeway Plants</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The goal of my project was to detect and compare the effects of air pollution given off from a small sized car, a mini-SUV, and a large SUV on iceplants (plants that are commonly found on freeways). Each car had a designated group of plants that would be polluted for intervals of one hour; the fourth group of plants was the control, which was not exposed to the pollution. <b>Methods/Materials</b> I used three different methods in this project. The first method was simply measuring average plant height between the intervals of pollution and measuring the average number of leaves before and after the pollution. The second method was running protein electrophoresis on the specimens from the plants. For my last method, I used an air pollution test kit to compare the amounts of different air pollutants given off from the different cars. <b>Results</b> The control grew the most in height and in average number of leaves, while the large SUV's plants were the least; the small sized the car's and the mini-SUV's plants showed similar growth, although the small sized car's plants showed a bit more growth. As for the protein electrophoresis, there were differences in proteins that were detected. The large SUV released the most pollutants. The mini-SUV released more of some, and the small sized car released more of others. <b>Conclusions/Discussion</b> All three cars were unhealthy for the plants, but the large SUV polluted the most; the other two cars were very close, but the small sized car would be put last out of the three because its plant were the healthiest out of the three.	
<b>Summary Statement</b> The purpose of this project is to detect and compare the air pollution given off by a large-SUV, a mini-SUV, and a small sized car and to compare the effects of the air pollution on iceplants (freeway plants).	
<b>Help Received</b> Ribet Academy Biology Lab	