



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Kristin N. Miller	Project Number J1420
Project Title The Hidden Dangers of Ozone Depletion: Is Our Food Supply at Risk?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The effects of ozone depletion and resulting increased amounts of ionizing radiation in our environment are under investigation. I wanted to find out what effects these increased doses of radiation might have on our food supply.</p> <p>Methods/Materials Four groups of snapdragon plants were exposed to ultra low, moderately low, and low doses of radiation respectively, twice weekly. The radiation was given using a linear accelerator. Group five was the control and received no radiation. They were measured in centimeters once weekly to determine any difference in growth.</p> <p>Results Groups one, three, and four all had similar growth rates that were nearly 50% decreased from the growth rate of the control group. Group two was less affected by the radiation, but still had a growth rate reduction of 14%.</p> <p>Conclusions/Discussion Overall, the ionizing radiation seemed to have a detrimental effect on the health of the plants as measured by their growth rate. If all plants in our environment share this sensitivity, the impact on our food supply could lead to significant food shortages.</p>	
Summary Statement My project is about the effects of ionizing radiation on plants.	
Help Received Used linear accelerator at Los Robles Hospital with the help of Jesse Lee and Ken Adger.	