



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

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| Name(s) Anita Sarkar | Project Number J1528 |
| Project Title The Effect of Beta-Carotene on Plant Cancer | |
| Abstract Objectives/Goals My objective was to learn if beta-carotene had any substantial effect on plant cancer. Methods/Materials I used sunflower and pea seeds, synthetic beta-carotene, water, grow-lights, potting soil, flower pots, inoculating needle, syringe, Agrobacterium tumefaciens, ruler, and a camera. I divided the seeds into 3 groups and made the beta-carotene solution. I germinated and planted the seeds. When the plants were sturdy enough I inoculated them with the Agrobacterium tumefaciens. After inoculation, I recorded their appearance and rate of deterioration. Results My overall results showed that synthetic beta-carotene had a negative effect on plant cancer. Conclusions/Discussion My results disproved my hypothesis. This may have been because the beta-carotene was synthetic and was not water-soluble. My project proves that synthetic beta-carotene has a negative effect on plant cancer in dicotyledons. | |
| Summary Statement My project is about the effect of beta-carotene on plant cancer in dicotyledons. | |
| Help Received Science fair coach obtained and diluted Agrobacterium tumefaciens; inoculated plants at USDA lab under the supervision of science fair coach; father provided transportation and monetary needs | |