



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Flora E. Barbash	Project Number J1702
Project Title Generation Pink! Mutations in Flower Color	
Abstract Objectives/Goals I was determining whether or not the plant species Bluebell Hyacinthoid, Non-scripta (found in my yard) after producing pink flowers last year, would once again bloom pink, when in the last 20 years they have continuously flowered blue. I believe that this was a cause of mutation, due to dominant and recessive genes, and that the offspring would inherit the characteristic. Methods/Materials Forty-five Bluebell bulbs, of various sizes (age), were collected from the pink Bluebell site. I divided them up into three even piles by size, with different planting methods for each pot: 1.) natural habitat; outside 2.) potting soil; inside and 3.) refrigerated first, potting soil; inside. I found the sunrise and sunset times for the time-period that they would normally be developing vegetation to emulate the time with a timer and grow lights (documented by photos). Results The pot that was first refrigerated and planted inside had the quickest growth time, producing five blue flowers, while the pot that was planted inside with no refrigeration (chill factor) flowered in the slowest amount of time, developing only two blue flowers. Conclusions/Discussion In conclusion, the pot that was in its natural environment produced seven flowers, one of which was pink. Since the color trait passed on to the scion plant, it shows that the original color change was a result of mutation. Thorough research led me to learn about the flower industry and how it uses these mutations in our every day lives, and about the controversy over genetic engineering.	
Summary Statement This was a yearlong study of plant mechanics with the experiment focused on #forcing# two rare pink (recessive genes) Bluebell bulbs, under controlled conditions, to bloom pink once again when they have always flowered blue.	
Help Received Mother drove me to interviews and library; had an interview with Tim Crockenberg of Sun Valley Floral Farms in Arcata; had an interview with Debra Girard from the Department of Agriculture and Natural Recourses at the U.C.; had an interview with Mary Barber of Miller Farms Nursery	