CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)
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Project Number
J2212

Project Title
The Mutagenic Effects of Gentian Violet

Abstract

Objectives/Goals
The objective of this study was to determine the mutagenic effects of a common type of dye, gentian violet on fruit flies.

Methods/Materials
This study used commercially available dye, wingless fruit flies and culture kit from pet supply industry, scale, magnifying lens, microscope. Flies were divided and exposed to different concentrations of dye, and the mutation rate was measured after each generation for three generations.

Results
There was measurable mutagenic effect that varied with concentrations that was up to two and a half times that of the control.

Conclusions/Discussion
This study shows that azo dyes do have mutagenic potential in fruit flies. This fact, and the prevalence of these dyes suggests that further study into their mutagenic potential is warranted.

Summary Statement
This study demonstrated that gentian violet dye causes mutations in fruit flies.

Help Received
I designed this experiment myself, attempting to recreate the results of "Comparative Mutagenic Effects of Laboratory Dyes on Drosophila Melanogaster". I had a half hour interview with graduate student James Mondo who helped put the experiment in scientific context.