CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)

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Project Number

S1901

Project Title

Digestion of GFP (Green Florescence Protein) in Caenorhabditis elegans

Abstract

Objectives/Goals

The main objective of this experiment was to further an understanding in protien digestion. Where does GFP get digested within the digestive tract of the C. elegans? I hypothesized that the GFP would be broken down and reassembled within the cells causing them to illuminate, as well as be digested and become invisible in the lower digestive tract.

Methods/Materials

In this experiment, I used ever renewed plates of E. Coli. The worms that I used as my model organisms were two strains of C. Elegans: N2 Wildtype and JJ48 mutant strain.

Results

GFP ingested by C.elegans is digested in the upper digestive tract and portions do illuminate cells of the worm itself.

Conclusions/Discussion

Digestion of protiens as far as this expirement is concerned occurs in the upper digestive tract. Not all protiens ingested are utilized some are still passed through the system.

Summary Statement

This project is intended to further the understanding of the digestion of proteins.

Help Received

Performed at Center High School, Worms donated by the UC Davis nematode lab, Center for Biophotonics Science and Technology Research Associate, Experiment overseen by Michael Wright.