

Lab 3: Virtual Flylab

The behavior of genes in organisms can often be inferred from the phenotypes of individuals who carry different versions (alleles). Last week, you worked with the *Drosophila* simulator to understand how to test hypotheses about genes, including dominance, linkage, and epistasis. Now, you can use these skills to think about the relationships between genes.

Objectives

- 1) Review Mendelian genetics.
- 2) Practice with statistical tests of hypotheses.
- 3) Generate, collect, and analyze multipoint cross data.
- 4) Answer the lab question and write a lab report.

Assignment - Lab Report

Write a brief lab report with that outlines your hypotheses, how you tested them, and a summary of your results. Include all information relevant to the lab question, including raw data, linkage maps, and statistical evidence.

Lab Question

For each of the assigned genes or groups of genes, what is the mode of inheritance, including lethality, and are any of the gene pairs linked or involved in epistatic relationships?

Introduction

Last week, you worked with your lab partner to test hypotheses regarding Mendelian inheritance in *Drosophila*. Now, you should work alone to answer the lab question for your four assigned genes. Your sign on is only valid for one person at a time, so plan how you will share this resource.



A white-eyed female