

Week 9 Analyzing Genomes

Learning Goal: Appreciate how genomic data can be used to study human health and diseases like cancer

After completing the pre-class assignments, students will be able to:

- Identify elements of protein-coding genes
- Interpret genome browser profiles summarizing data for position in a genome
- Describe how properties of particular amino acids in a protein may affect protein structure and function

After this week's class meeting students will be able to:

- Evaluate the effect of a coding mutation
- Explain the role of model organisms in research
- Select an appropriate model organism to address a given research question
- Compare and contrast evolutionary, biochemical, and genetic approaches in determining functional elements in genomes
- Formulate a hypothesis to address the likely function of a mutation in the cancer genome taking available genomic information into consideration (week 10 discussion)