10/3 Lecture Summary

Natural selecton

***Selection and Genetic Drift*:** In order for selection in a population, you need variation in the population.

Natural Selection:

- **Positive selection:** + advantage for an allele, increases in population
- **Negative selection:** disadvantage for allele, disappears in population

What produces selection?

- **Internal environment**:
  - Genetic environment
  - Physiological/ developmental environment
- **External environment:**
  - Physical environment
  - Biological Environment (competition, predation, parasitism, food supply, mate selection)

- **Success can be judged in 2 ways:**
  - Absolute terms: Will the genome work? (does it allow for a living and functional organism?)
  - Relative terms: Is it the best genome available? (there may be others with superior genomes, making this one relatively not the best)

- Slight advantages can cause *HUGE* changes over time
- The selection against a dominate trait will cause *RAPID* elimination
- Selection against recessive is much slower

- Fitness: survivability of one group compared to another
- Fitness of best allele is ALWAYS =1