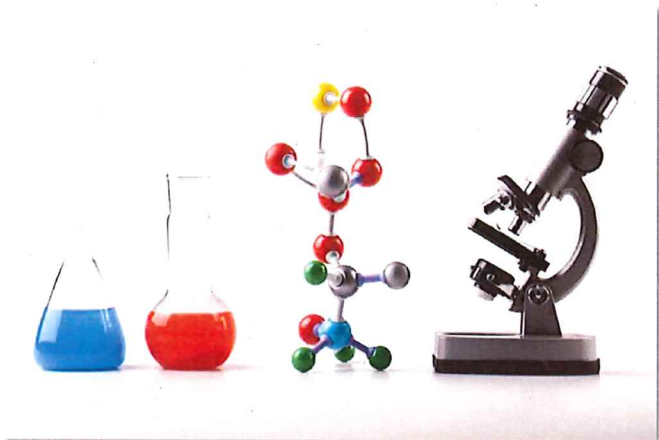




LAB ASSIGNMENT 9

Mendelian Genetics

Prof. Padmaja Vedartham, Ed.D.

Lone Star College Cy-Fair

BIOL 1408 Online

Answer the following questions below. Use your textbook as a resource to help you figure out the alleles, the cross and the results.

1. A couple who are both carriers of the gene for cystic fibrosis (CF) have two children who have cystic fibrosis. What is the probability that their next child will have cystic fibrosis? What is the probability that their next child will be a carrier of cystic fibrosis?
50% *25%*
2. Black coat color (B) in rats is dominant to brown coat color (b). There is a cross between a homozygous recessive and a heterozygote. What is the chance of getting an offspring with the homozygous recessive phenotype?
3. Red flowers (R) in snapdragons are dominant over the recessive white flowers (r). Heterozygotes have pink flowers, whereas the two homozygotes have red flowers or white flowers. Plants with red flowers are crossed with plants with white flowers. What proportions of the offspring will have pink flowers?
4. Huntington's is an autosomal dominant disease. Work a cross between a homozygous recessive mother (hh) and a heterozygous father (Hh). The offspring would have very different outcomes from an autosomal recessive disorder. What are the possible genotypes and phenotypes of children born from this union?
5. Mendel wanted to cross true breeding tall plants (TT) with true breeding short plants (tt). Would it be possible to produce offspring that were true breeding for either of these characteristics if these two plants produced offspring?