

- ❖ Morgan's student Alfred Sturtevant used **frequency of recombination** between genes on same chromosome as a measure of distance between genes and mapped their position on chromosomes.
- ❖ If traits are controlled by three or more genes then the traits are called as polygenic traits. It also takes into account influence of environment.
 - ✦ The phenotype reflects the contribution of each allele, i.e., the effect of each allele is additive, e.g. Human Skin Colour
- ❖ **Types of sex-determination.**
 - XO-Type = Male heterogamete
e.g. = Grasshopper
 - XY-Type = Male heterogamete
e.g. = *Drosophila*, Man
 - ZW-Type = Female heterogamete
e.g. = Birds
- ❖ In Humans, genetic make-up of sperm determines sex of the child and in each pregnancy, there is always 50% probability of a male or female child.
- ❖ In honey bees, sex-determination is haplo-diploid type in which unfertilised egg develops as male (**drone**) i.e. **haploid** and Queen and worker bees (females) are **diploid**.
- ❖ Mutation is caused due to alteration in chromosomes which result in abnormalities or aberrations. Chromosomal aberrations are commonly observed in cancer cells.
- ❖ **Mutagens** are Chemical and physical factors that induce mutations, e.g. UV radiations, X-rays etc.
- ❖ Pedigree analysis is a study of family history about inheritance of a particular trait or disease.
- ❖ A few chromosomal aberrations are colour-blindness, Haemophilia, Thalassemia, Sickle Cell anaemia and phenylketonuria.
- ❖ A few disorders are Down's syndrome, klinefelter's syndrome, Turner's syndrome

Preview from Notesale.co.uk
Page 2 of 2