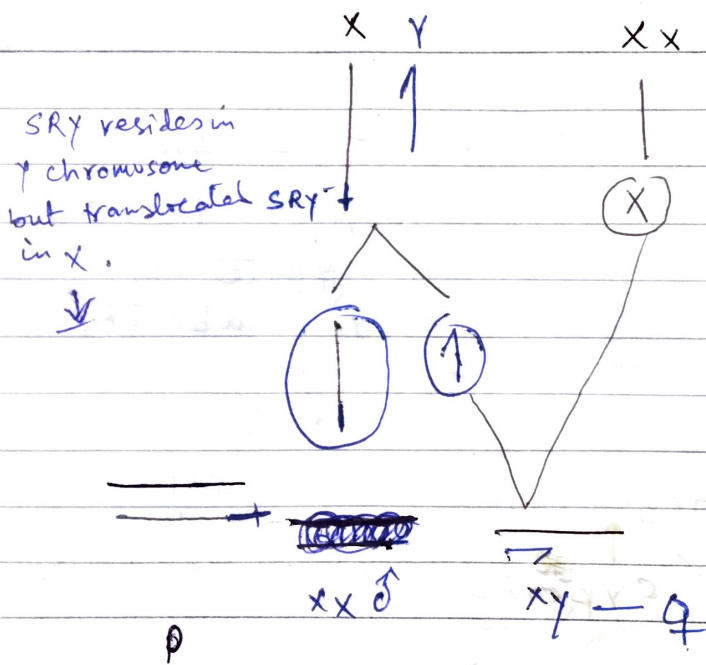
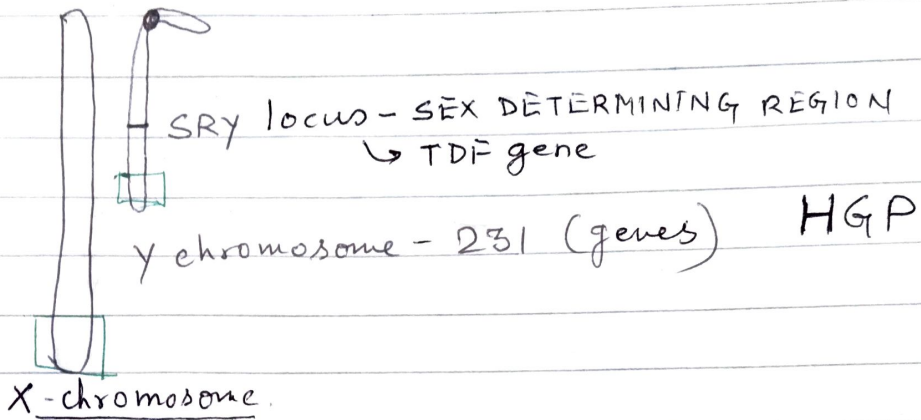


Y-chromosomal sex determination:-

Human, ^{Silene} Latifolia, Coccinia melandrium



Rare XX male XY females in humans are produced due to translocation between X & Y chromosomes in germ cells of male parent, so SRY locus translocated to X-chromosome. The small chromosome segment of X & Y chromosomes which are homologous called Pseudoautosomal regions.

$\frac{X}{A}$ Mechanism of sex-determination - Drosophila

$$\frac{X}{A} \text{ ratio} = \frac{\text{No. of X-chromosome}}{\text{No. of sets of Autosomes}}$$

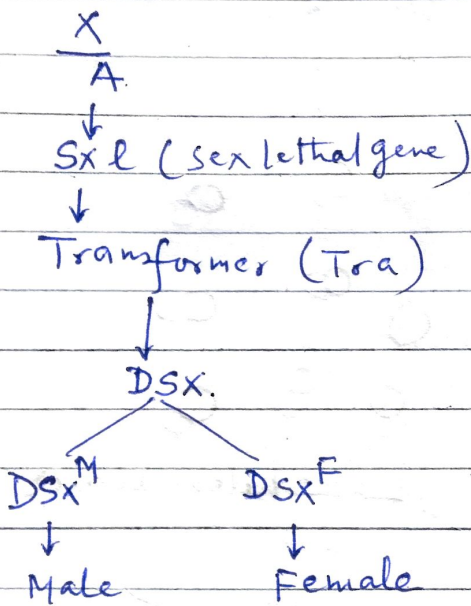
$\frac{X}{A}$ ratio - 1.50] Superfemale
1.33]

1.00 Female

0.75] Intersex
0.67]

0.50] Male

0.33 - Supermale



Mechanism of $\frac{X}{A}$ ratio Detection :-

X chromosome - Numerator gene - Sisterless gene

Runt gene

Sis
homodimer
(Activator TF)