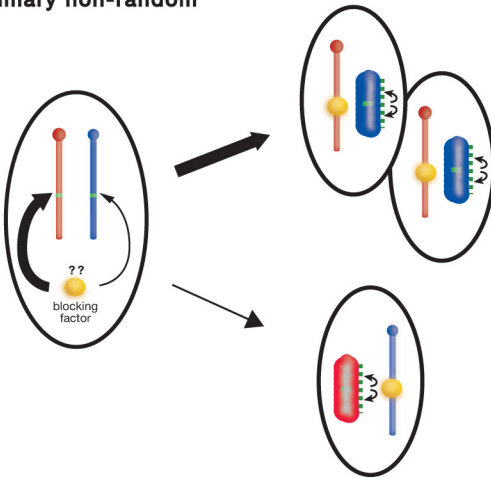


a) Primary non-random



b) Secondary non-random

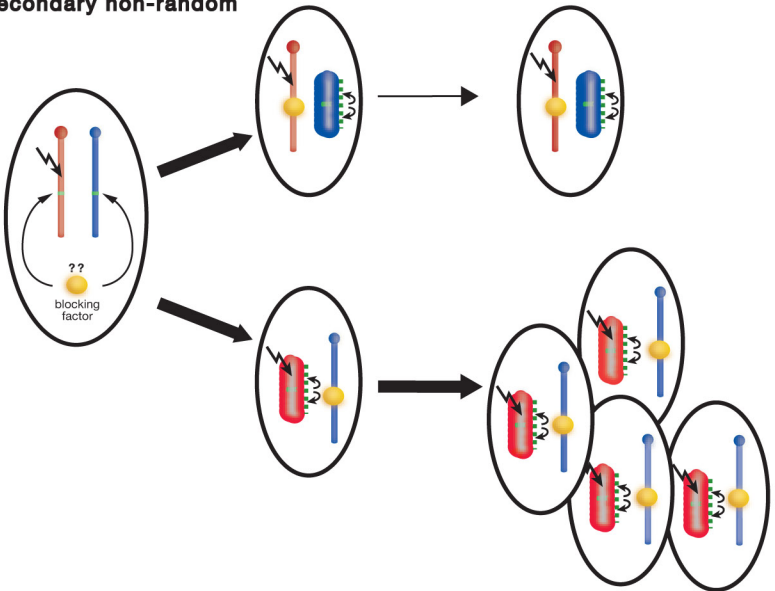


Figure 7. Models for Nonrandom X Inactivation

Primary nonrandom X inactivation refers to skewing of the initial choice of which X chromosome is inactivated. Theoretically, this could occur in heterozygous females where there is a bias in the probability of the two alleles binding the blocking factor. In secondary nonrandom X inactivation, the choice of which X is inactivated is random, but cell selection events result in progressive loss of cells inactivating one of the two X chromosomes. For example, where there is a deleterious mutation on one X chromosome, cells that inactivate the other, wild-type X chromosome will be preferentially lost.