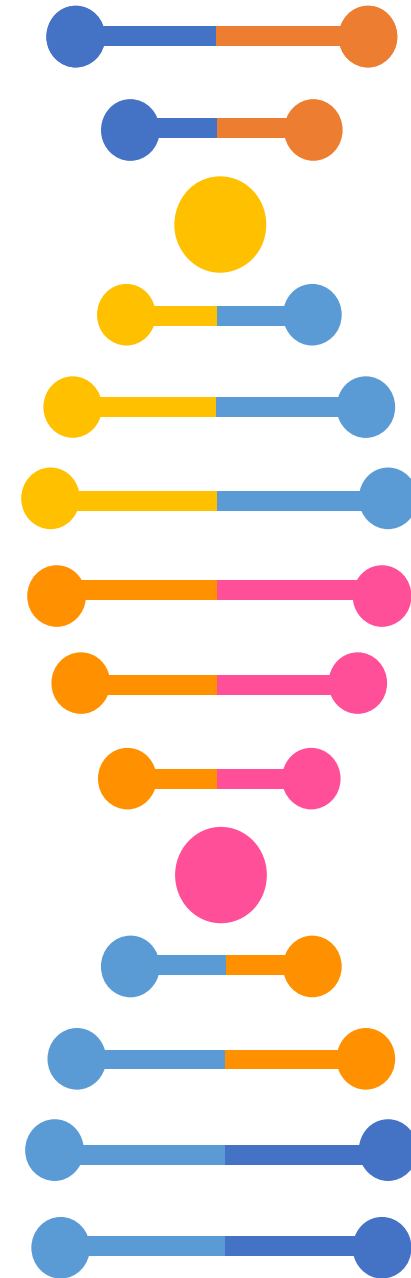
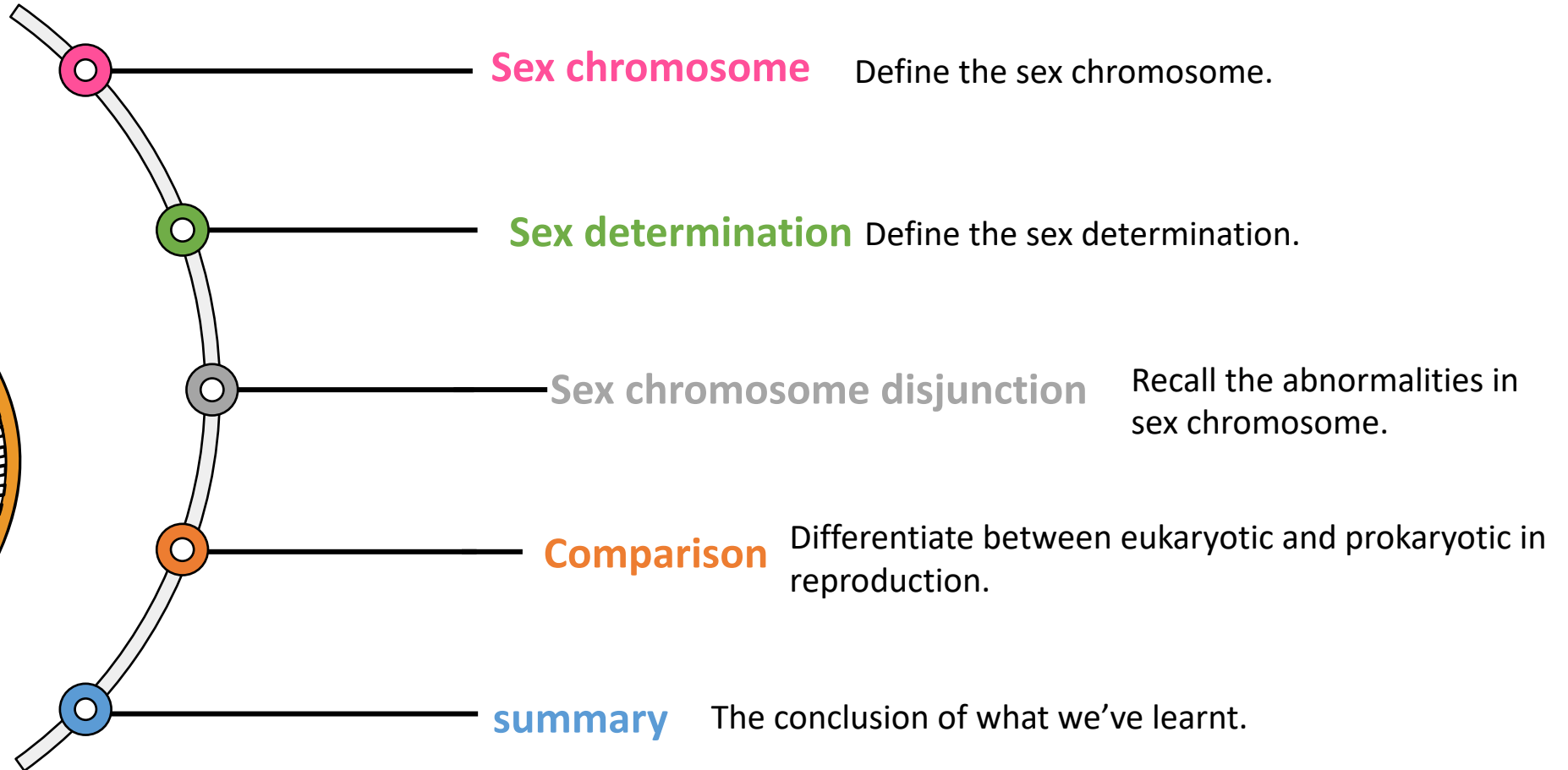
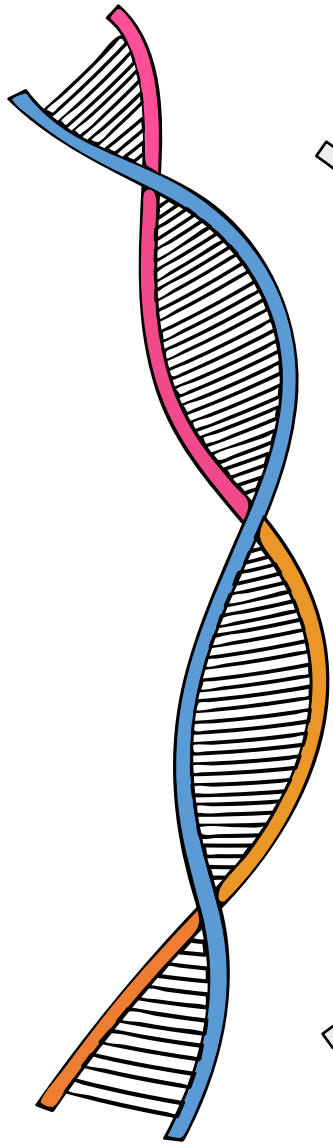


SEX CHROMOSOME & SEX DETERMINATION

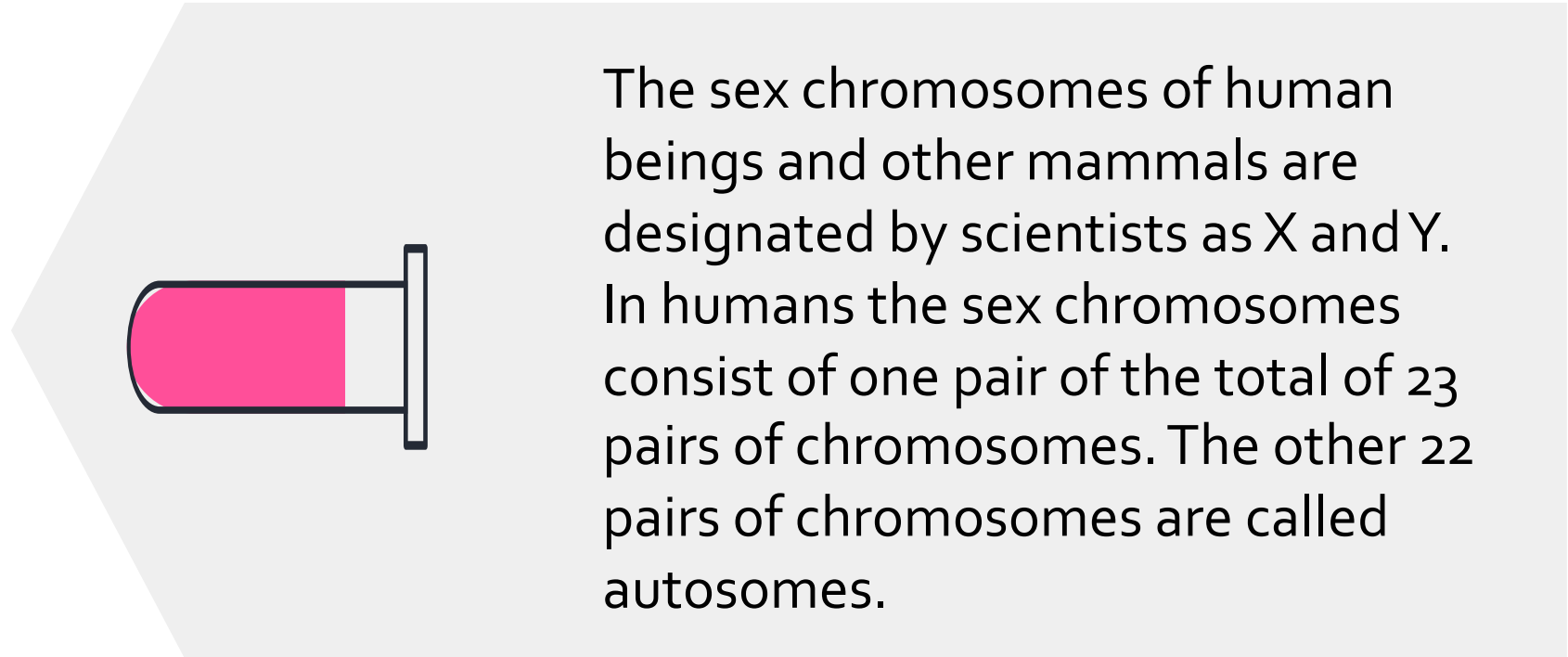
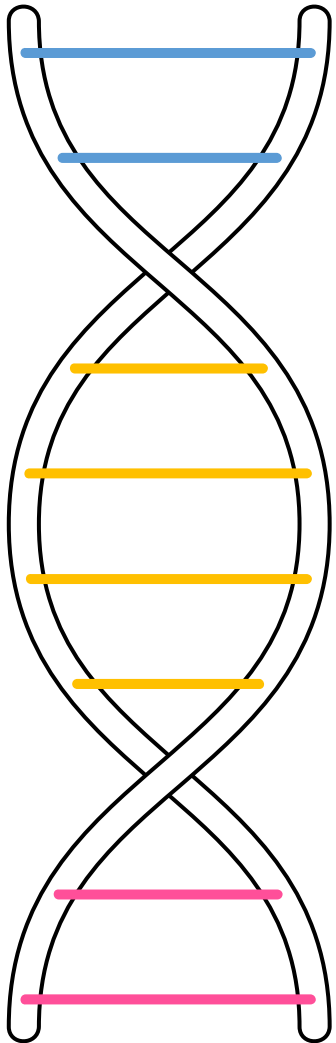
SHAIMA BUKER and MALAK ALARIBI



ILOs



Sex Chromosome



The sex chromosomes of human beings and other mammals are designated by scientists as X and Y. In humans the sex chromosomes consist of one pair of the total of 23 pairs of chromosomes. The other 22 pairs of chromosomes are called autosomes.

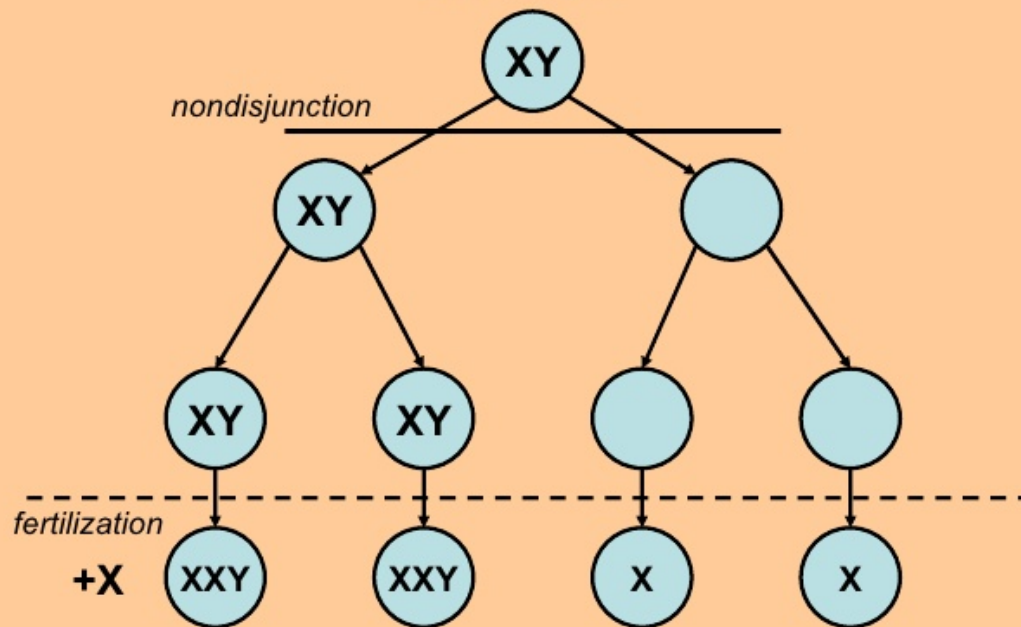
Sex determination

Is the process by which the male and female sexual organs develop from neutral embryonic structures. The normal human fetus of either sex has the potential to develop either male or female organs, depending on genetic and hormonal influences, Y chromosome mechanism of sex determination occurs, in which the Y chromosome determines the sex of an individual.



Sex chromosome disjunction

Nondisjunction of sex chromosomes during spermatogenesis – 1st meiotic division



Sex chromosome abnormalities occur as a result of chromosome mutations brought on by mutagens (like radiation) or problems that occur during meiosis.



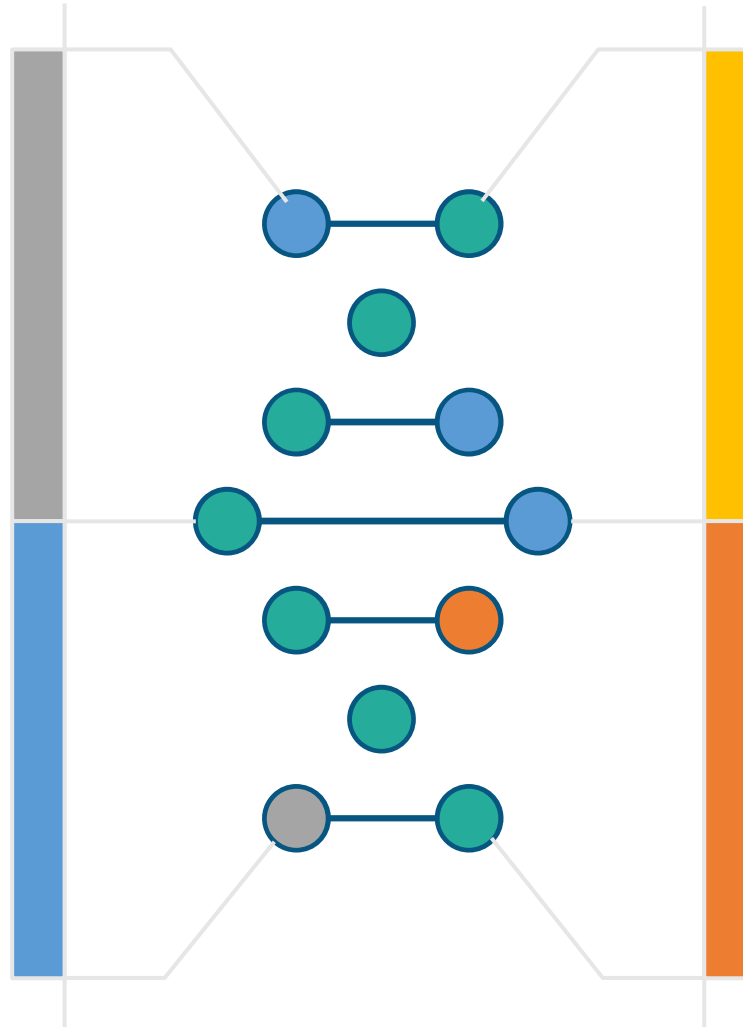
Another type of mutation occurs during meiosis and causes cells to have either too many or not enough chromosomes

Differences between eukaryotic and prokaryotic in reproduction

EUKARYOTIC

Most eukaryotes undergo sexual reproduction

Sexual reproduction in eukaryotes results in offspring with genetic material which is a mixture of the parents' genome



PROKARYOTIC

prokaryotes reproduce asexually

prokaryote will reproduce clones of itself via binary fission and relies more on horizontal genetic transfer for variation.

Summary



- Humans > 46 chromosomes (23 pairs)
- Human females have two X chromosomes (XX), whereas human males have one X and one Y (XY).
- Chromosomes other than sex chromosomes are called autosomes.
- In eukaryotes, the sex chromosomes and autosomes are found in all cells not only in gametes
- eukaryotes undergo sexual reproduction
- prokaryotes reproduce asexually

References



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1

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Reference

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3

4

Reference

<https://www.thoughtco.com/sex-chromosome-abnormalities-373286>



Thank
you