

Immune → proper final notes

* Immune diversity:
Allelic exclusion



only single chromosome used to construct light chain &

single chromosome used to construct heavy chain of Ig

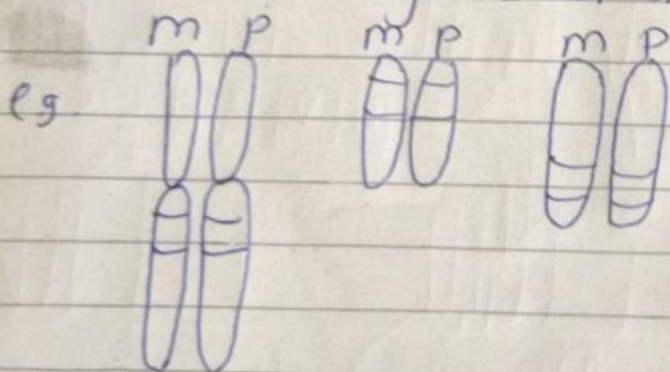
produced by single B cell (or) plasma cell

→ Each B cell & plasma cell has

1 light chain gene cluster.

only single chromosome (2n) gene cluster derived from either maternal or paternal chromosome pair is expressed.

→ Each B cell & plasma cell has both maternally & paternally derived heavy chain gene clusters.



m - maternal
p - paternal

K

λ

H

H - Heavy chain

gene cluster

2

22

14

→ chromosome

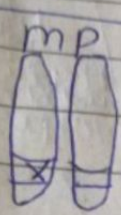
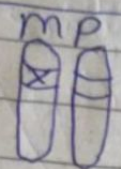


→ maternally derived
K chain cluster &
maternally derived
heavy chain cluster
expressed

K

λ

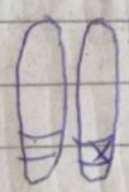
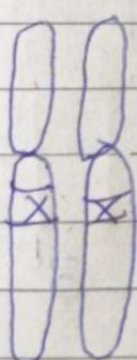
H



→ maternally derived
λ chain cluster &
paternally derived
Heavy chain cluster
expressed.



→ Paternally derived
K chain & paternally
derived heavy chain
cluster expressed



→ paternally derived
λ chain cluster &
maternally derived
heavy chain cluster
expressed.

→ The restriction of VLCL & VHCH
expression to single member of each
involved chromosome pair is called
allelic exclusion.