

# Organes et tissus lymphoïdes

## Organes lymphoïdes primaires

## Organes lymphoïdes secondaires

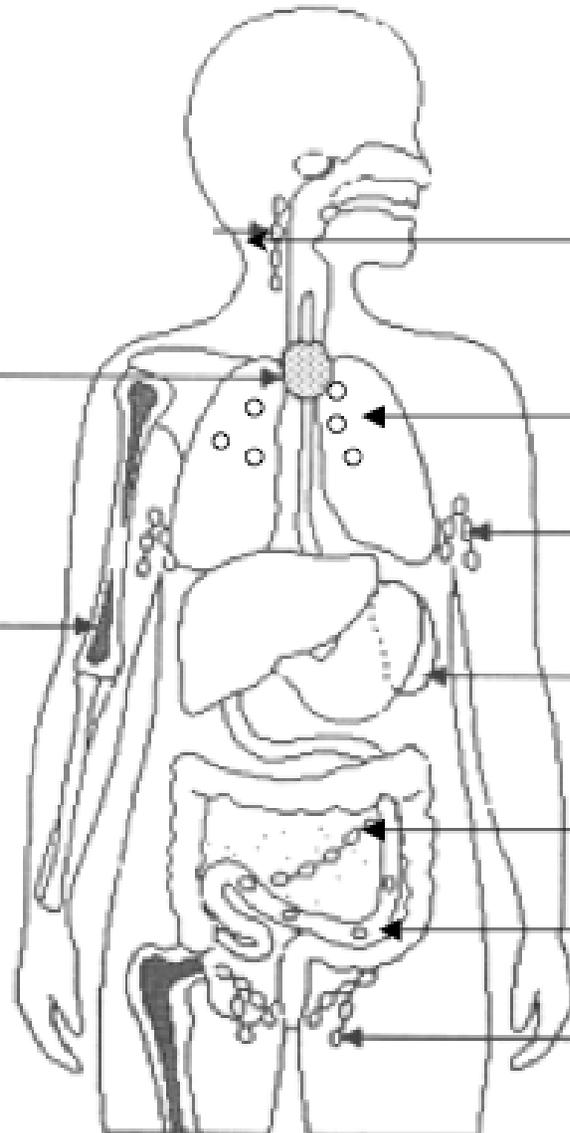
Cortex-Medulla

**Thymus**

LT CD1+

**Moëlle osseuse**

LB



**Anneau de Waldeyer**

Ganglions

Amygdales

végétations

**Tissu lymphoïde associé  
aux bronches**

**Ganglions lymphatiques**

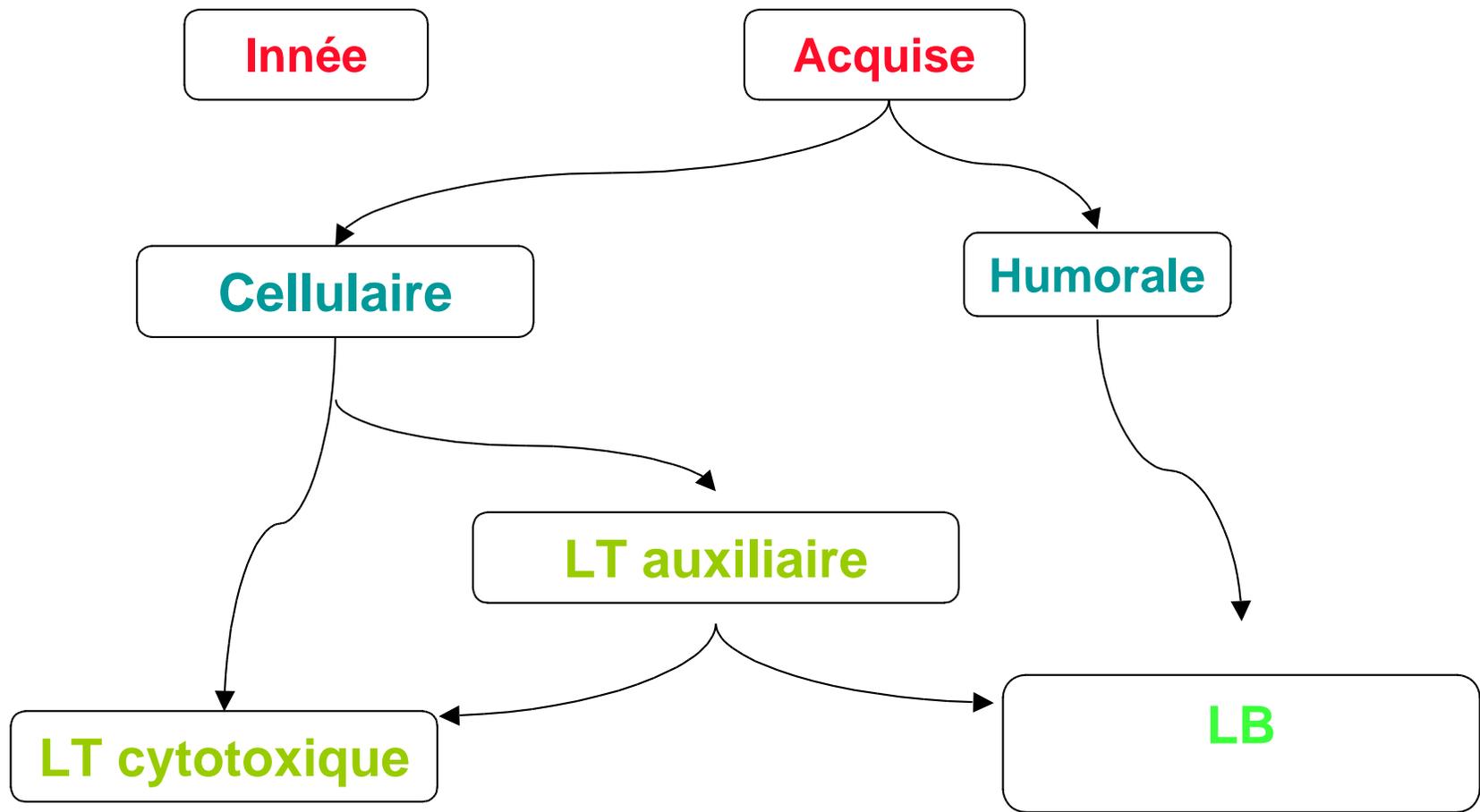
**Rate**

Pulpe rouge/blanche

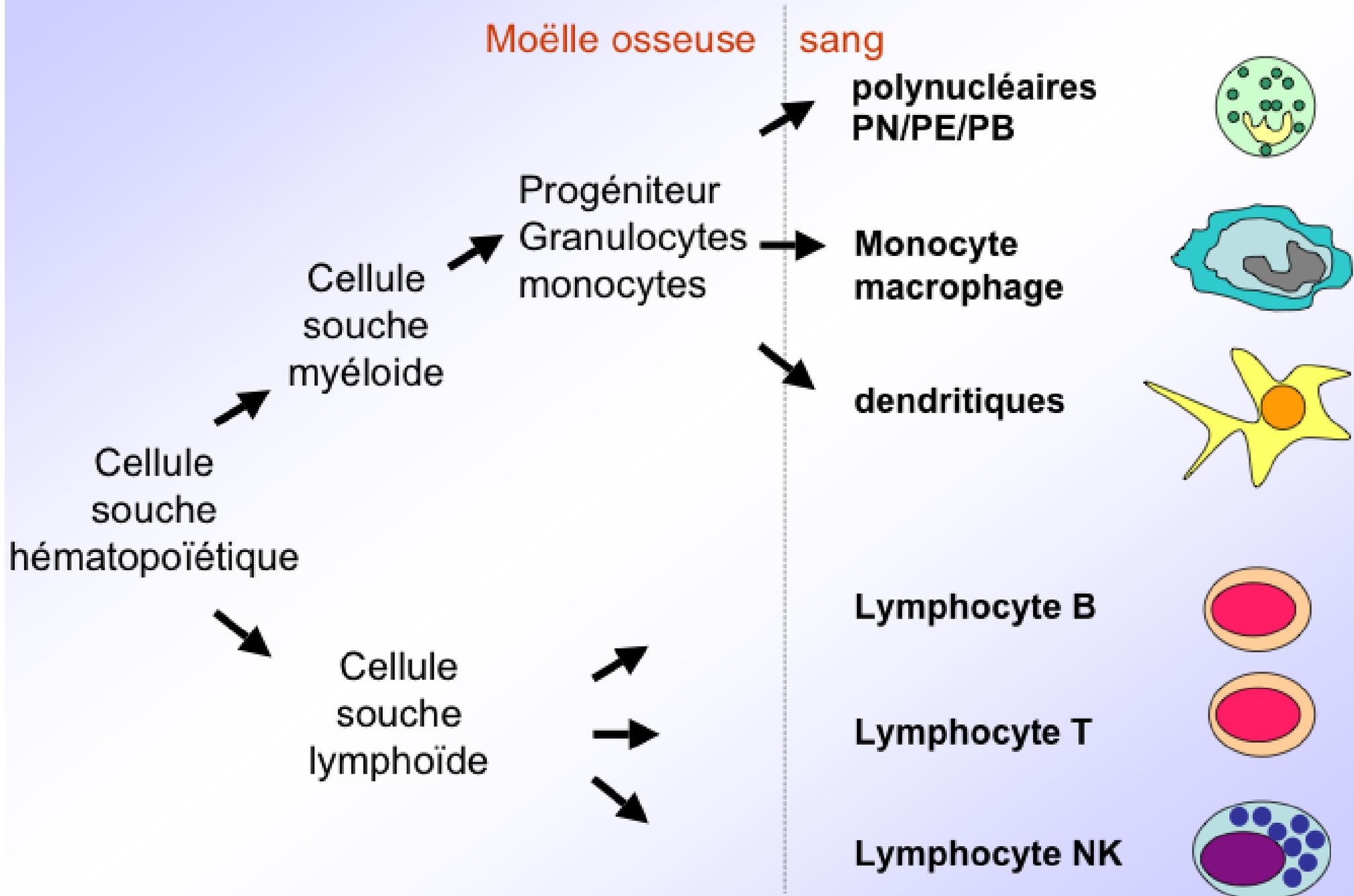
**Ganglions mésentériques**

**Plaques de Peyer**

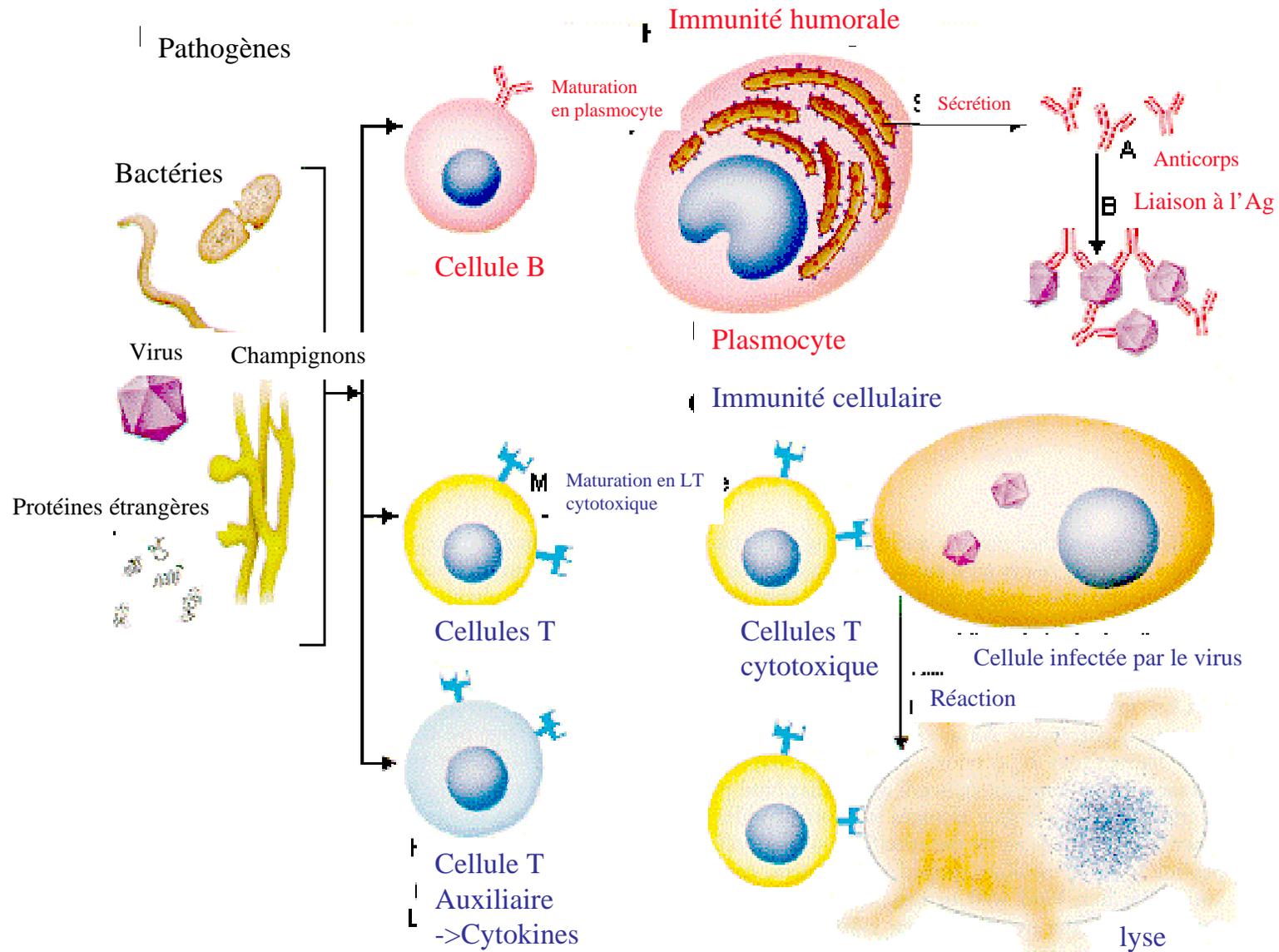
**Tissus lymphoïdes uro-génital**



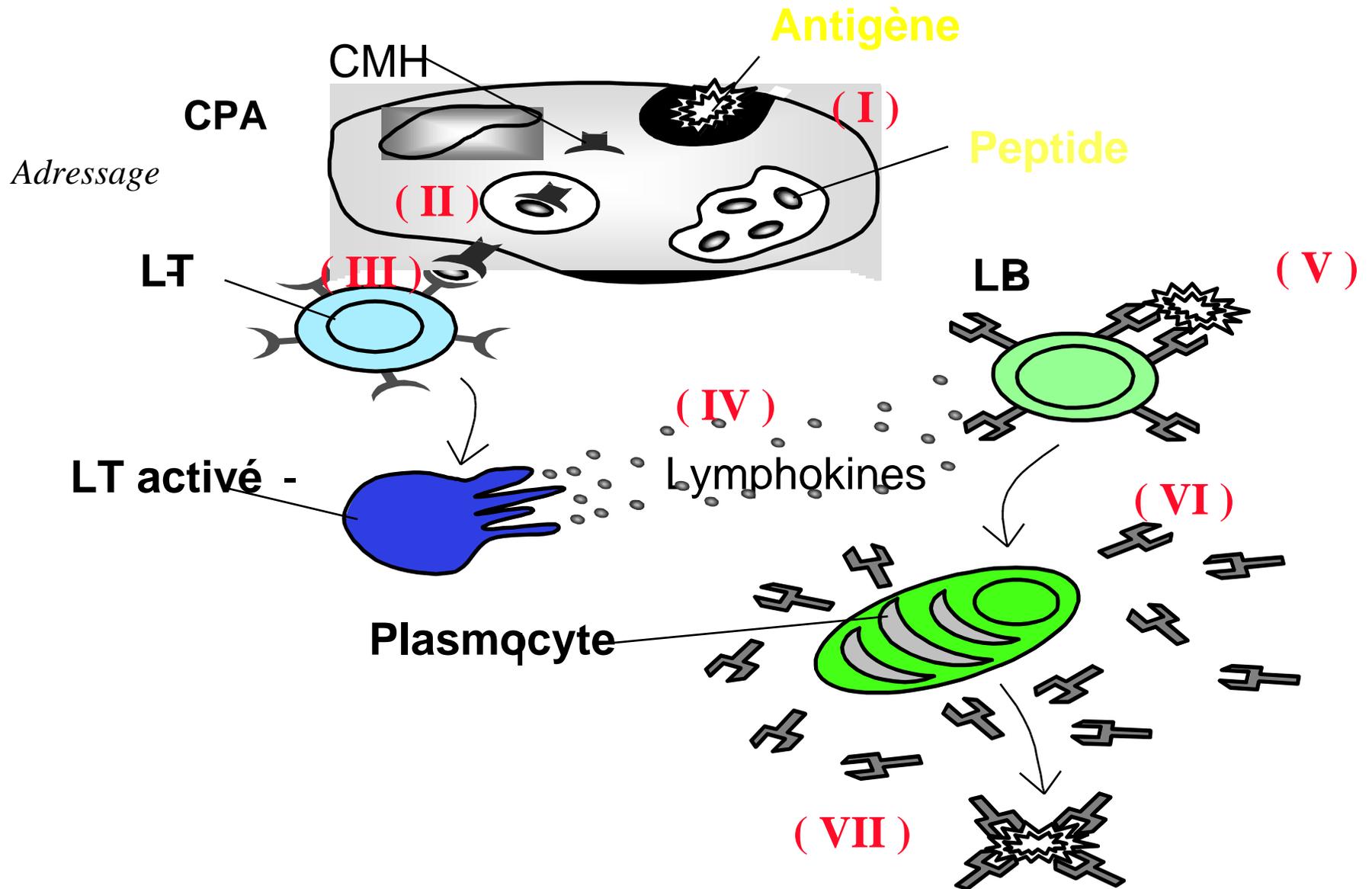
# Cellules Immunocompétentes



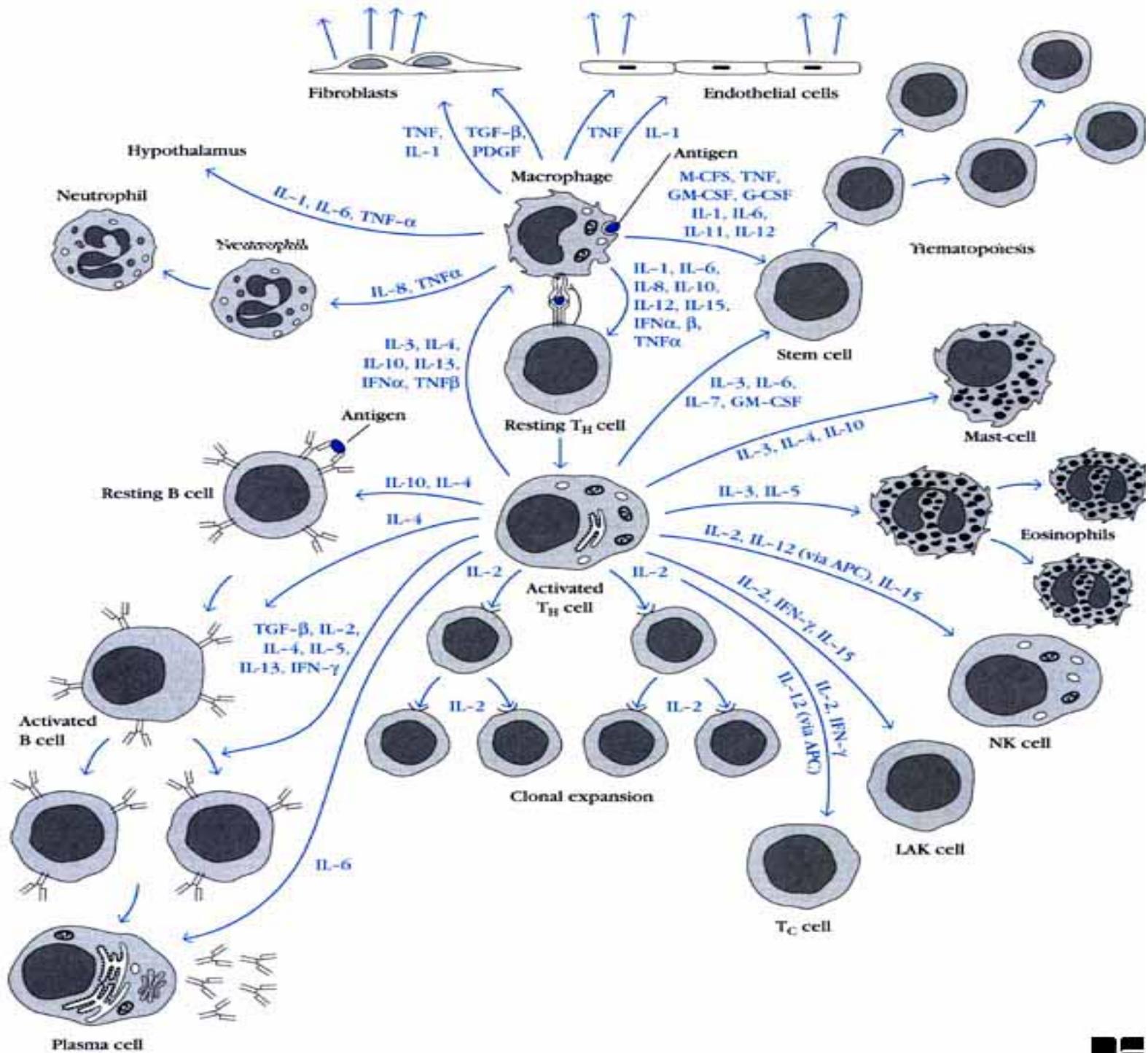
# Schéma général de la réponse immune



# Vue générale



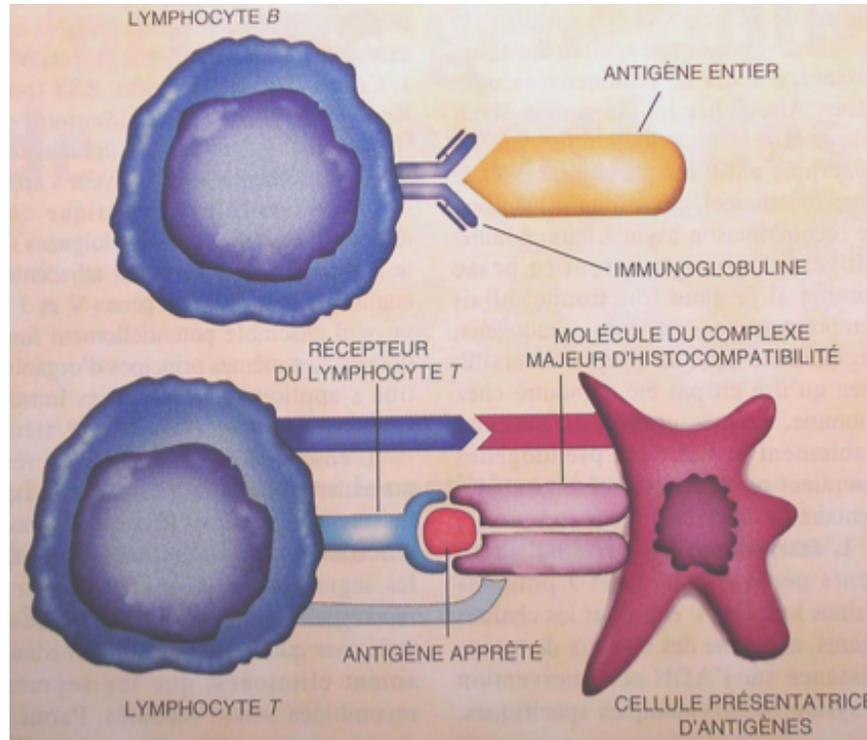
INFLAMMATORY RESPONSE



# Comment se fait l'interaction spécifique Ag/Cellule?

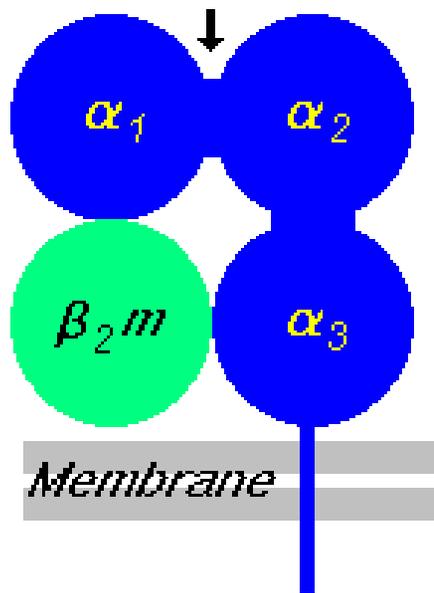
4 éléments

Ag  
CMH  
TCR  
BCR



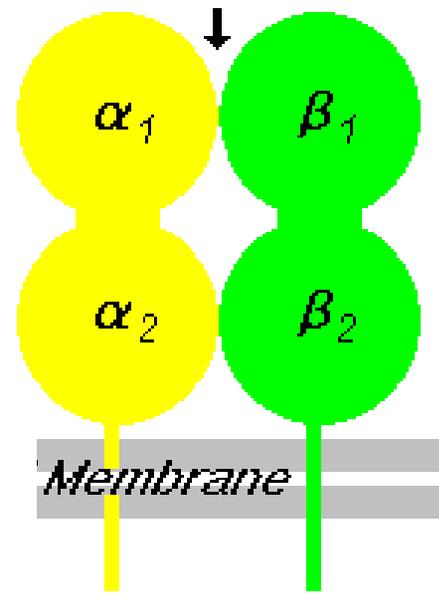
## CMH classe I

Liaison du peptide

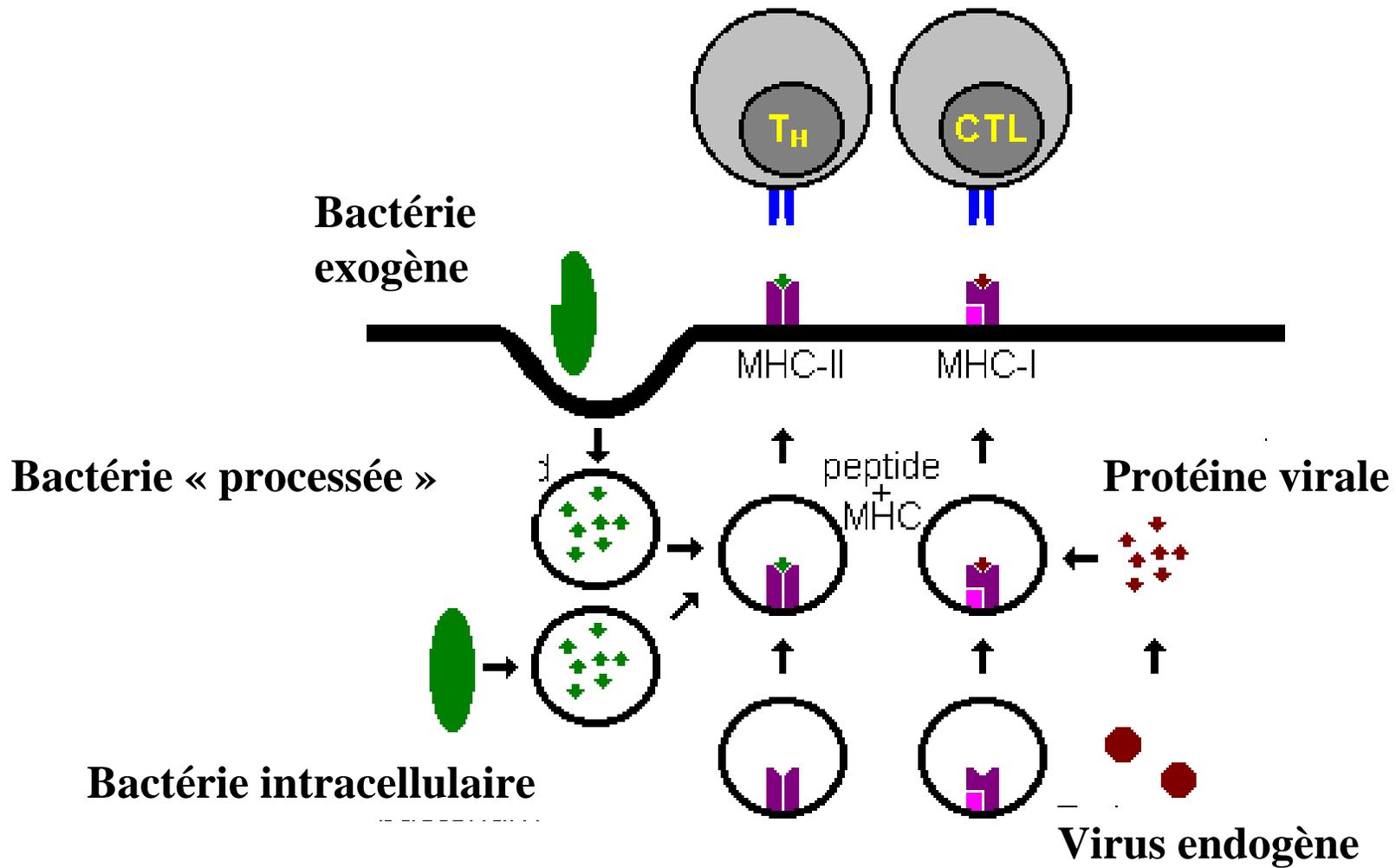


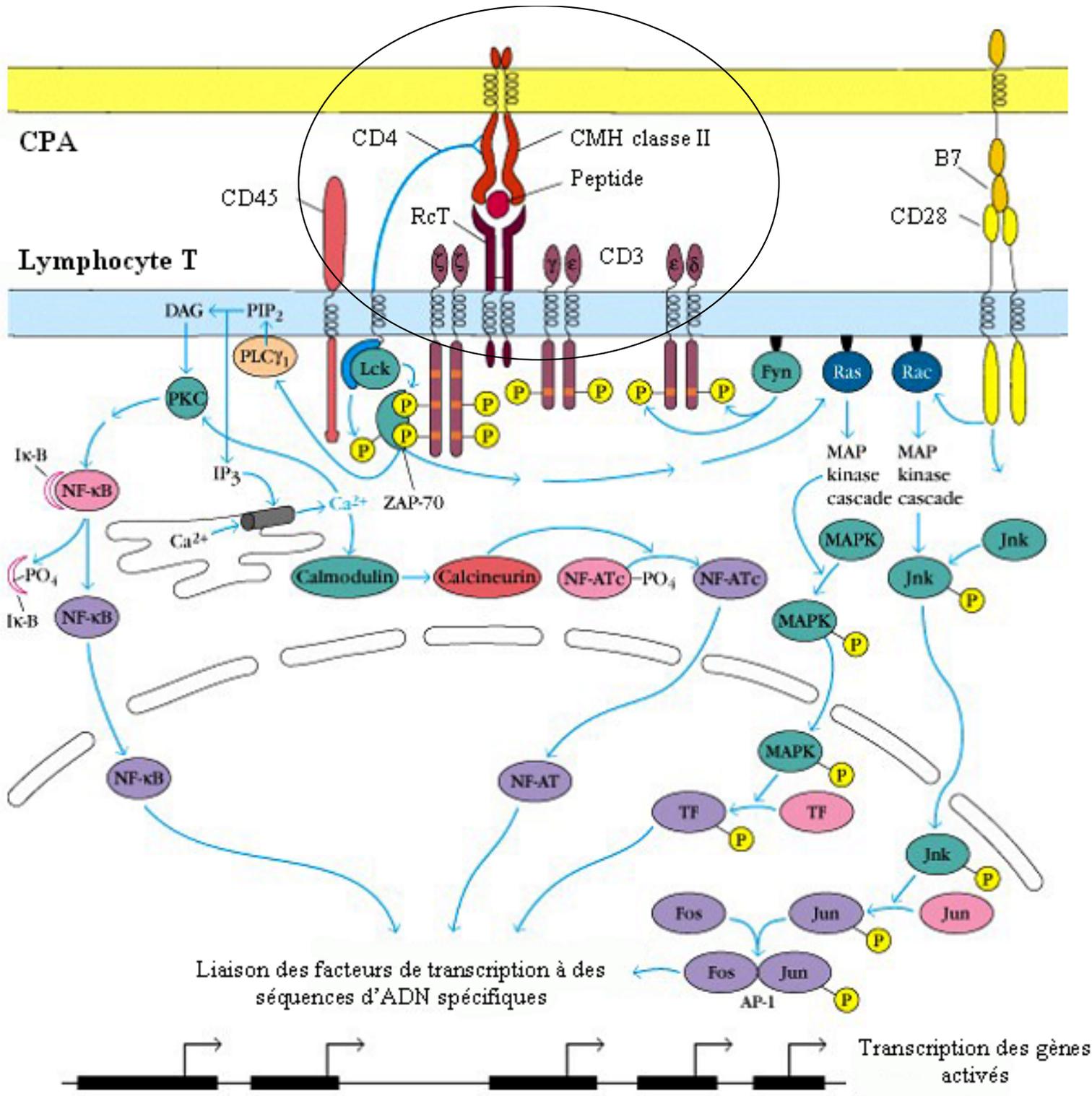
## CMH classe II

Liaison du peptide



# Comparaison CMH I//CMH II



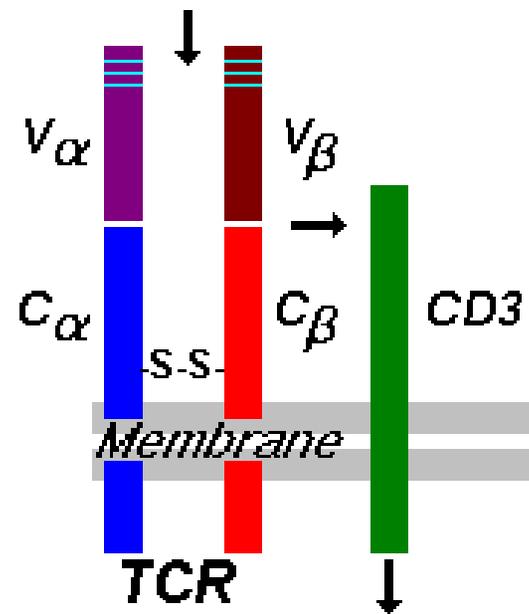


Liaison des facteurs de transcription à des séquences d'ADN spécifiques

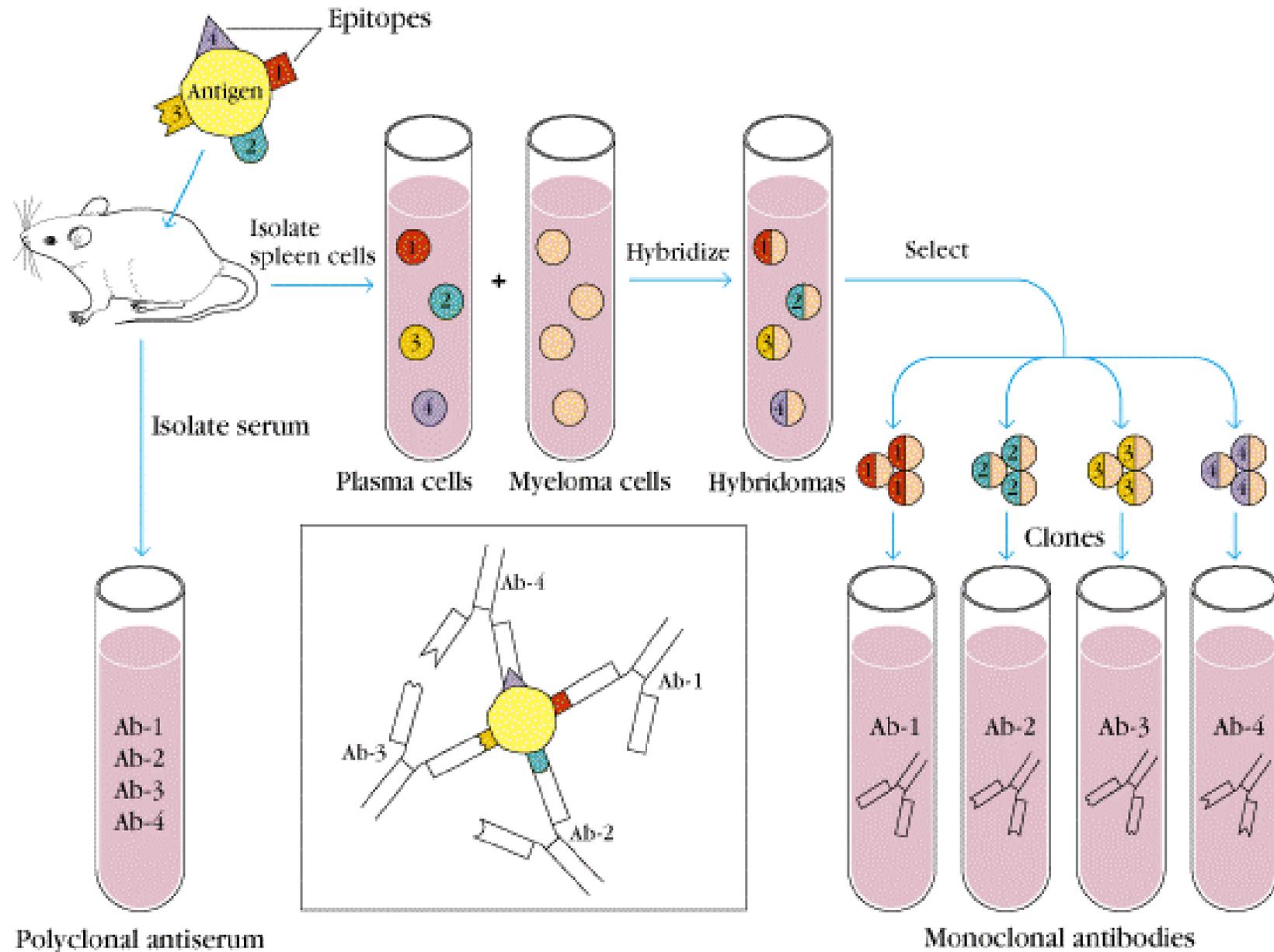
Transcription des gènes activés

# Structure du TCR

## Reconnaissance Ag



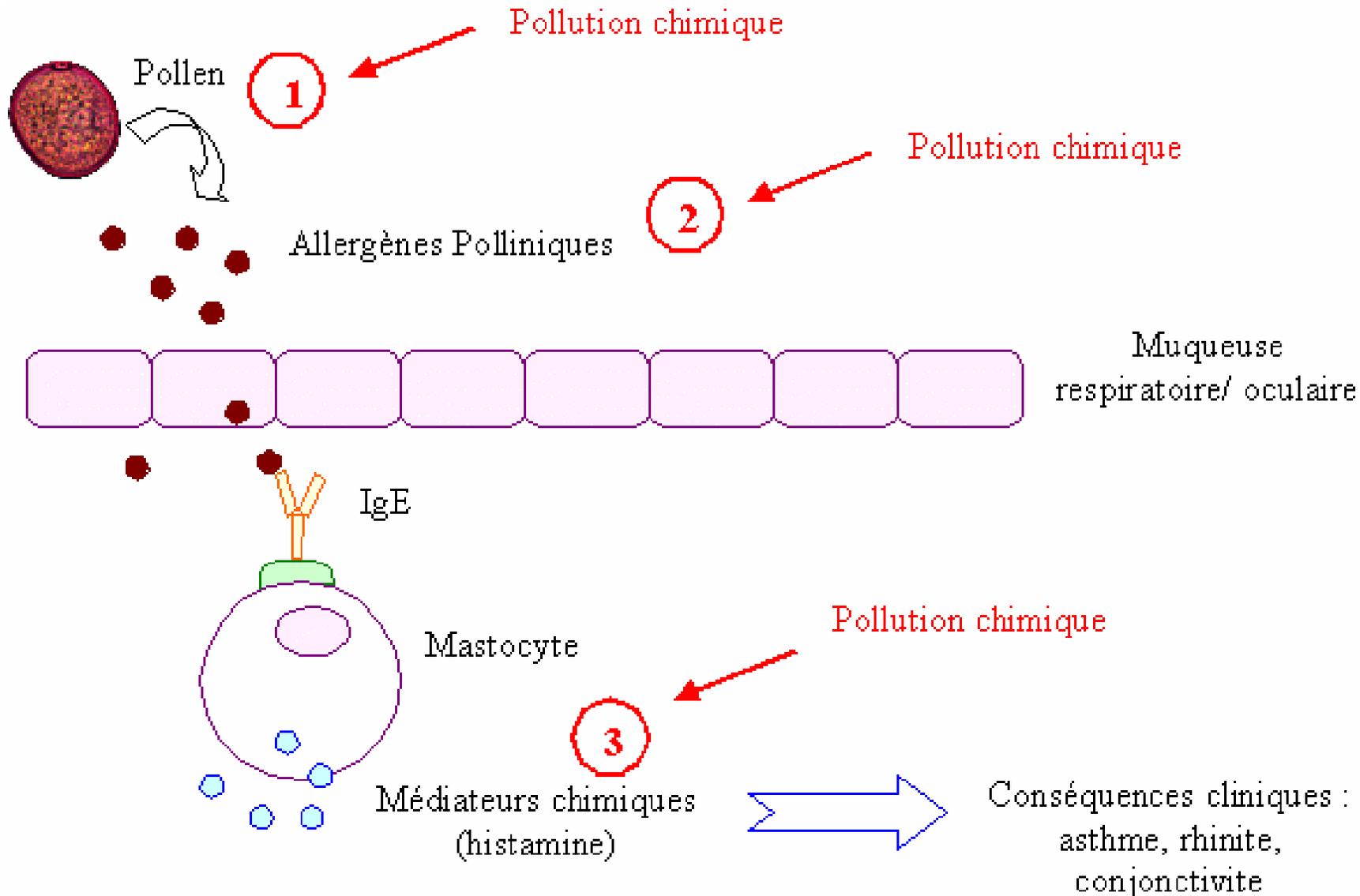
# Anticorps polyclonaux et monoclonaux



# Situations particulières

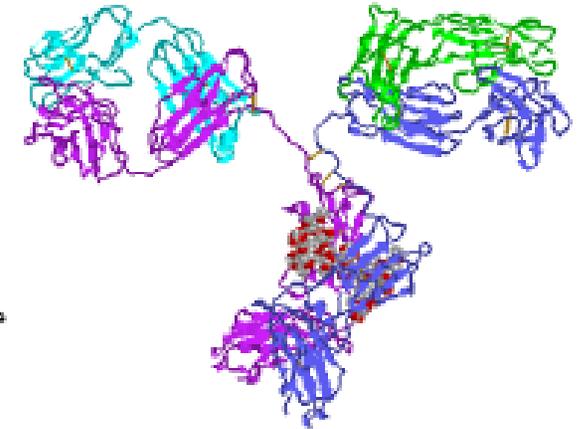
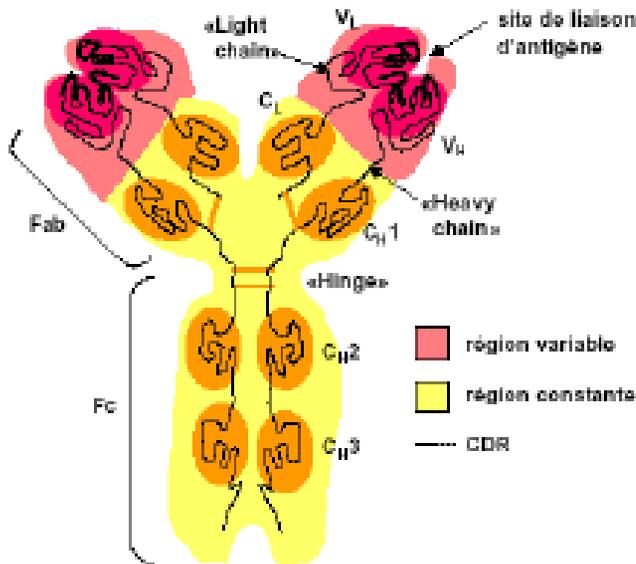
Autoimmunité

Allergies

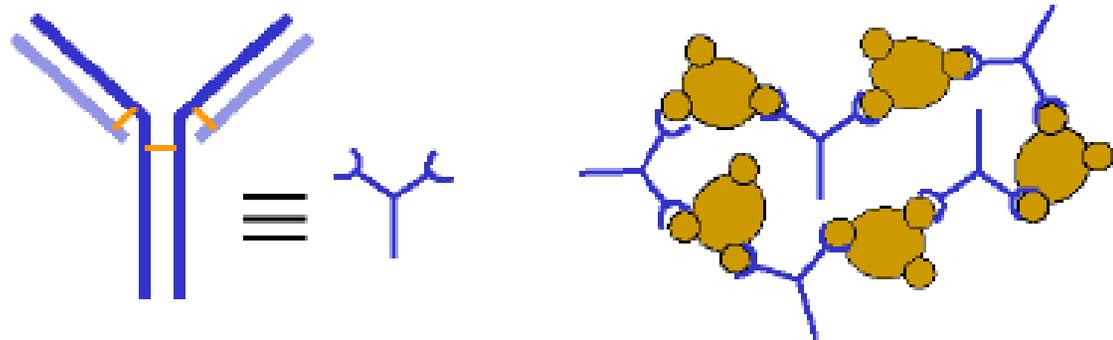


# Généralités sur les anticorps

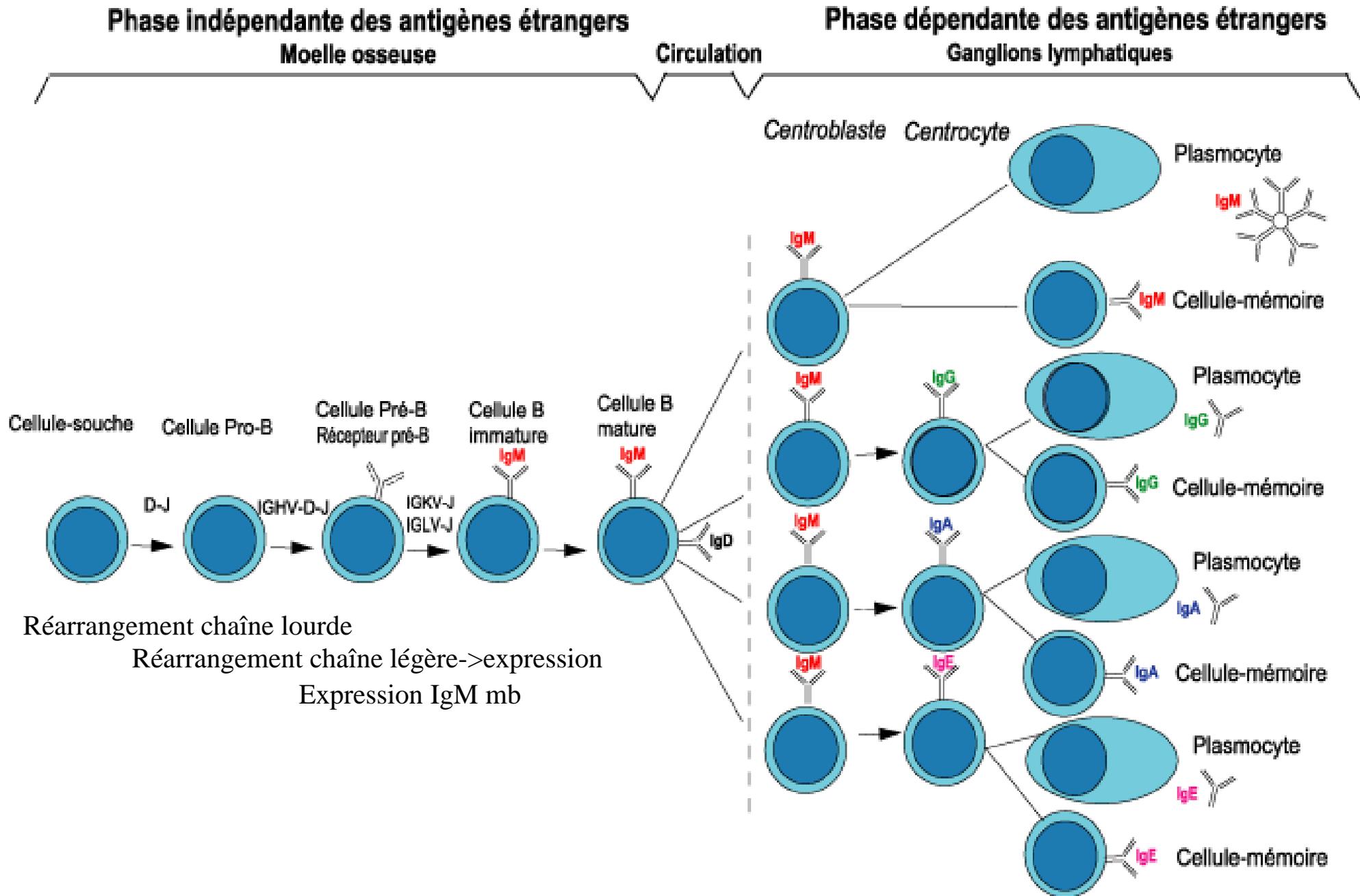
Immunoglobulines  
Affinité et spécificité  
 $10^{-10} < K_D < 10^{-7}$   
Quantité et diversité



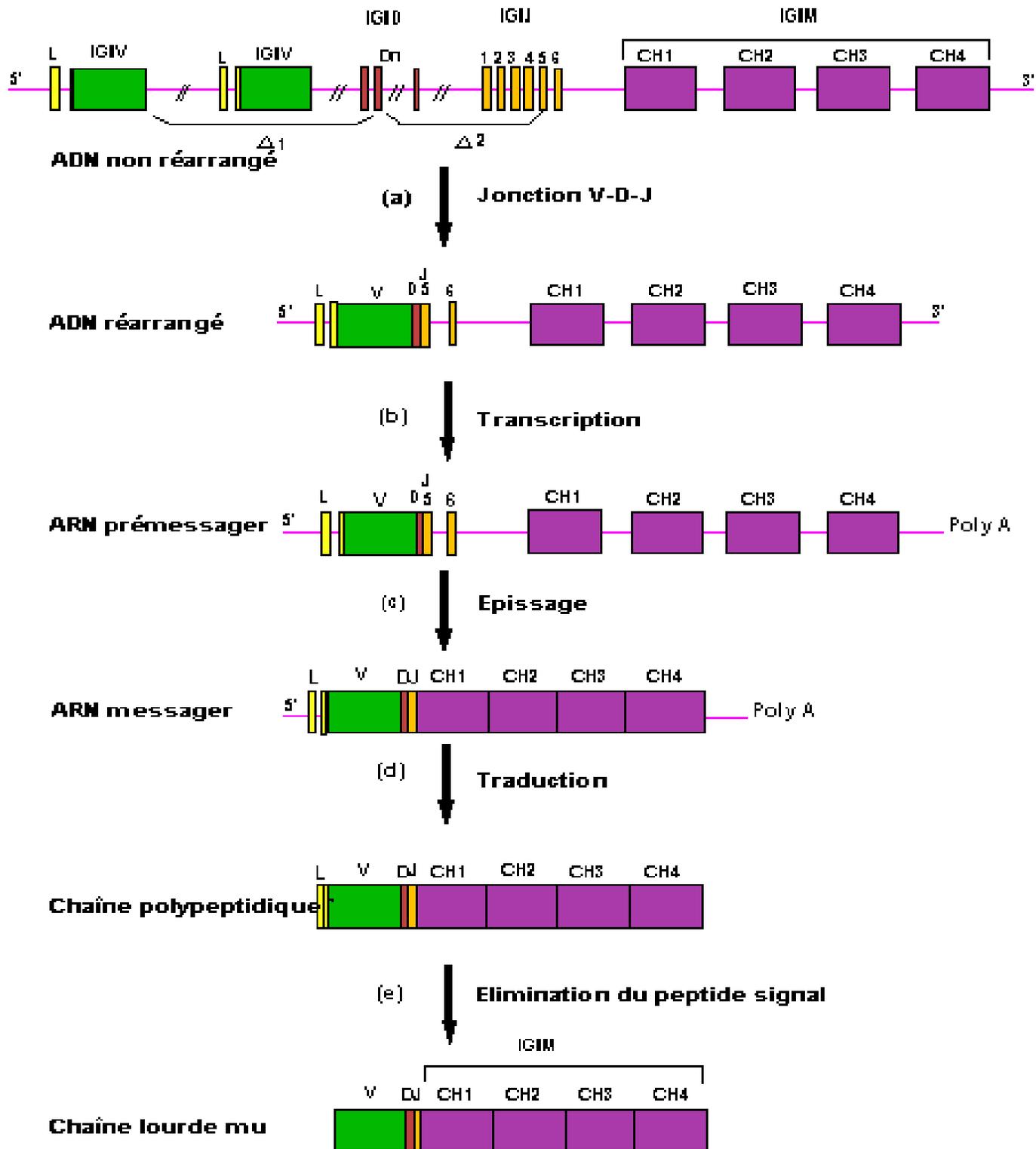
Formation d'un réseau



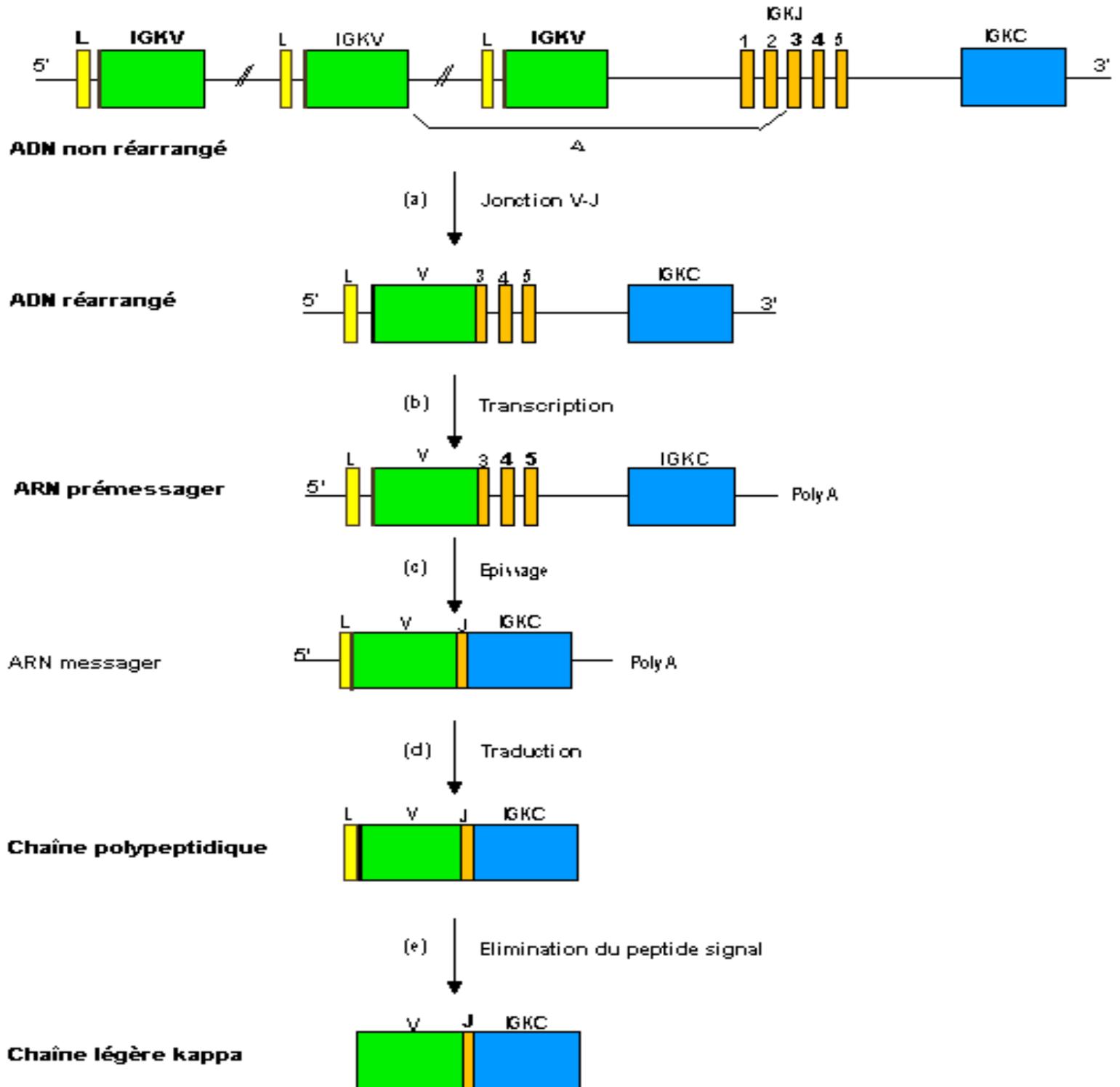
# Voie de différenciation des LB



# Réarrangement de la chaîne lourde $\mu$

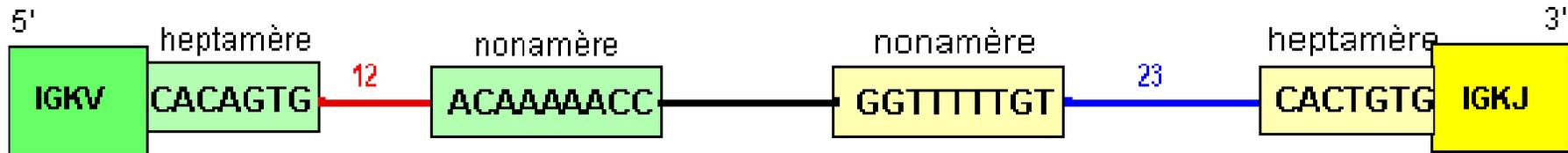


# Réarrangement de la chaîne légère K

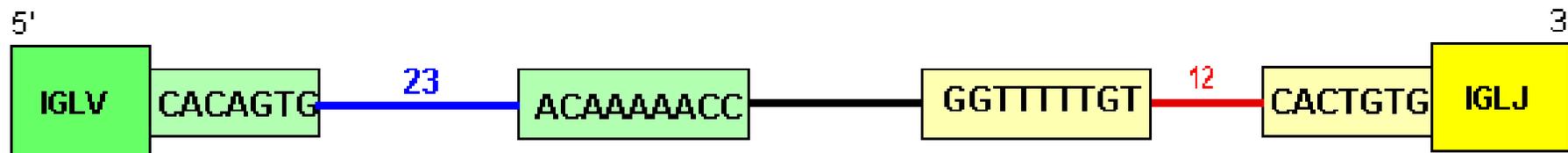


# Réarrangements au niveau des signaux de recombinaison

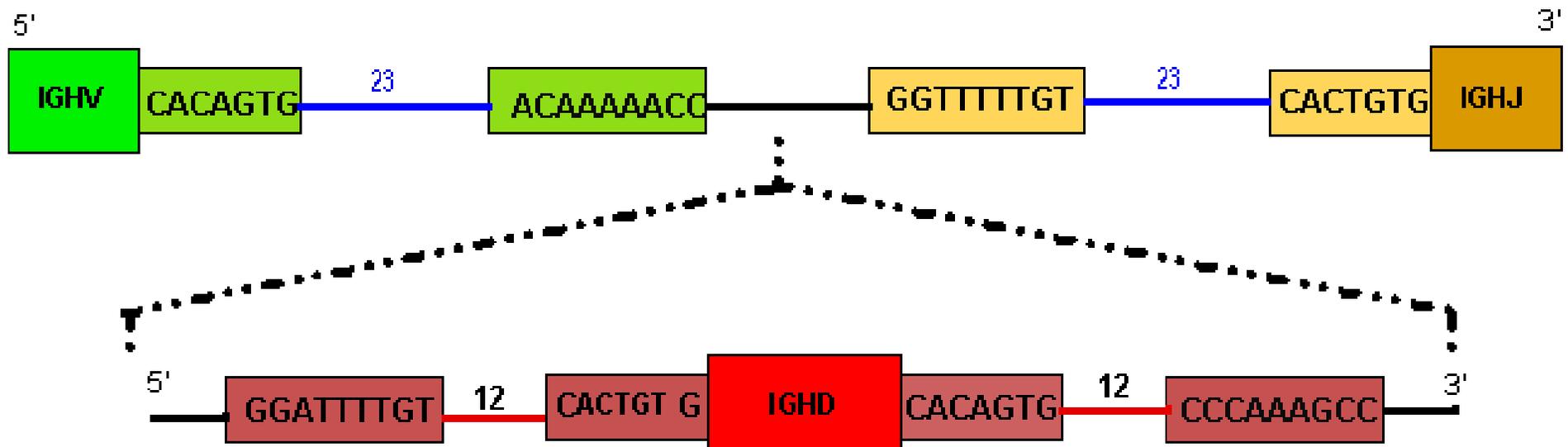
## Chromosome 2p11.2



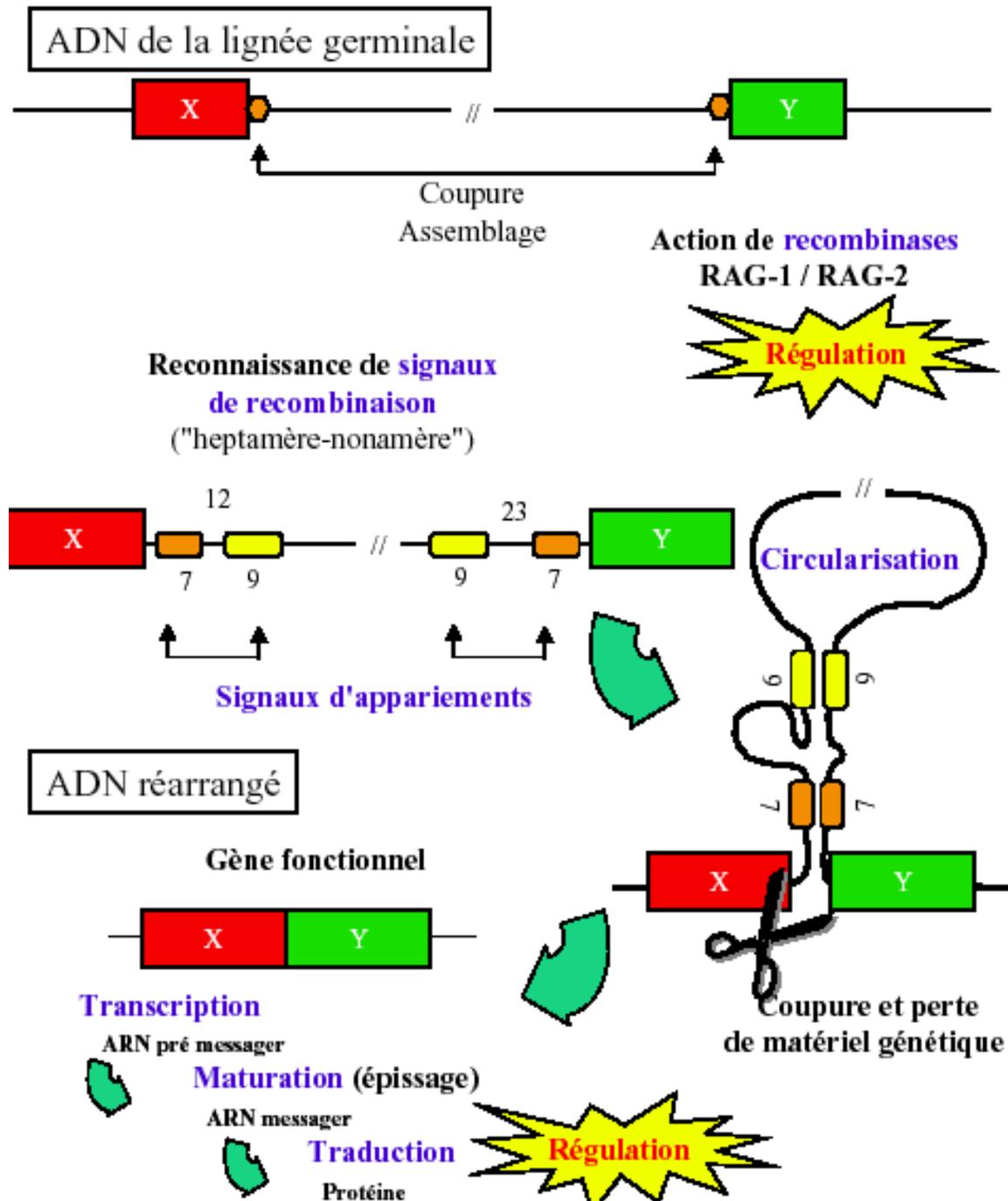
## Chromosome 22q11.2



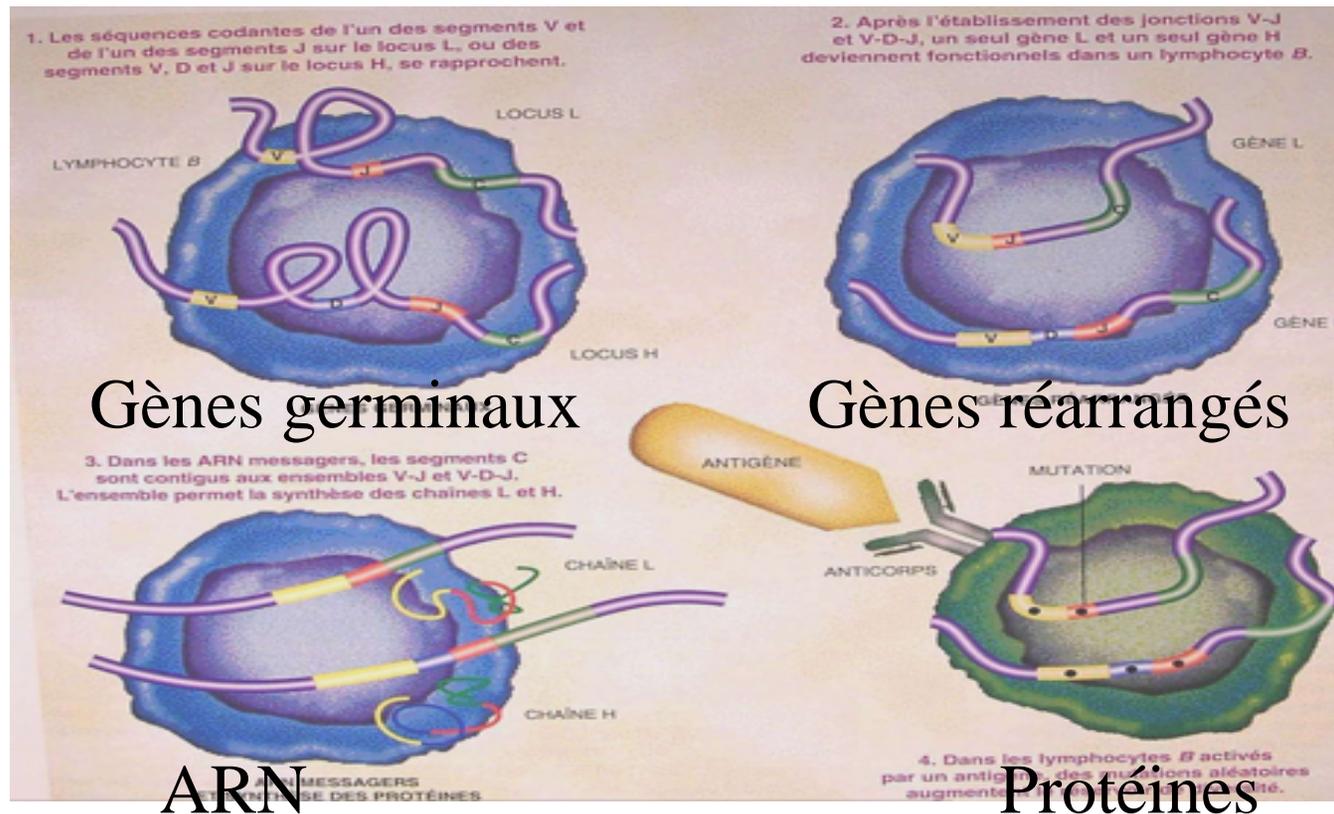
## Chromosome 14q32.33



# Réarrangements somatiques intra chromosomiques



# Les réarrangements des LB vus de la cellule



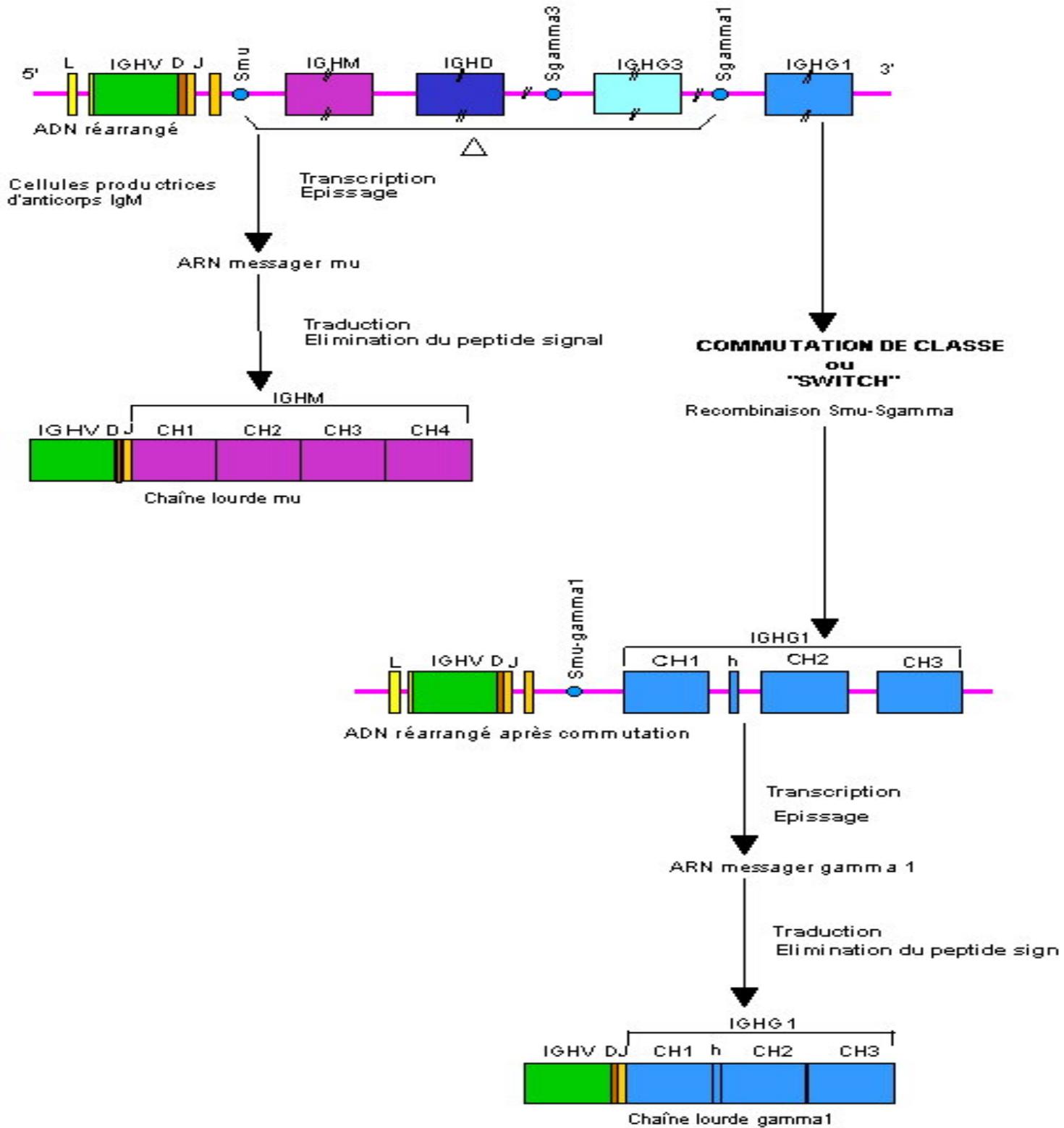
Gènes germinaux

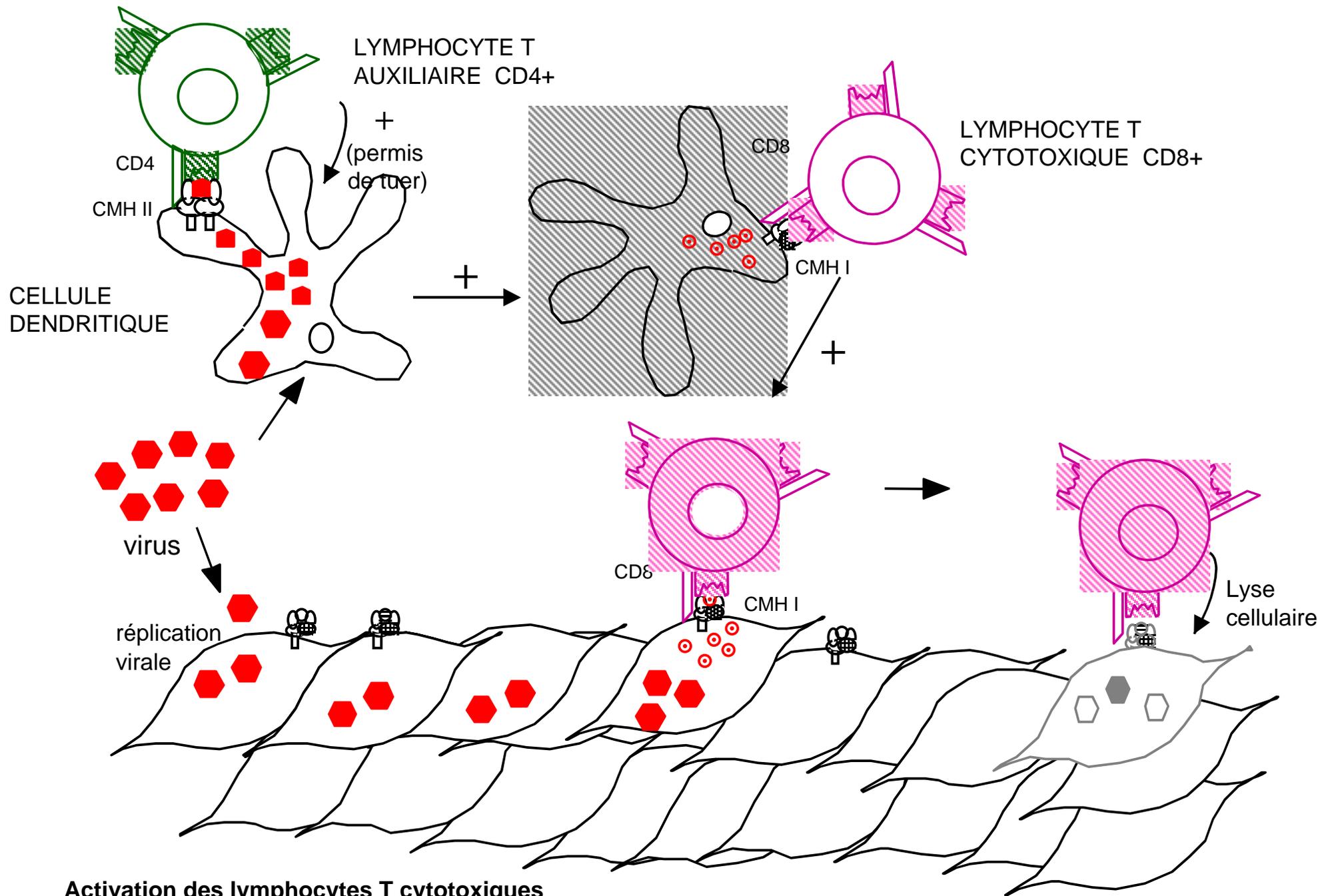
Gènes réarrangés

ARN

Protéines

# La commutation de classe





**Activation des lymphocytes T cytotoxiques**  
*exemple de la lutte contre une infection virale*



CELLULES ENDOTHELIALES

Plaquettes



Lymphocytes



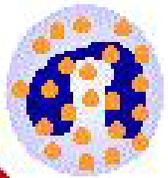
Monocytes



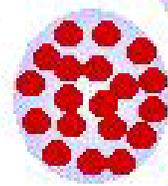
Dolynucléaires



neutrophiles



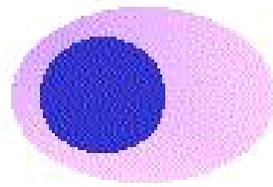
eosinophiles



basophiles

CELLULES DU SANG PERIPHERIQUE

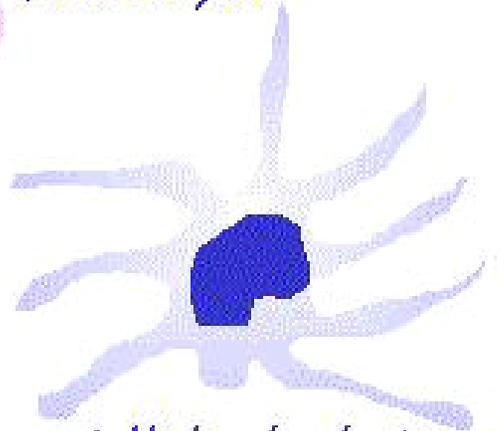
CELLULES EXCLUSIVEMENT TISSULAIRES



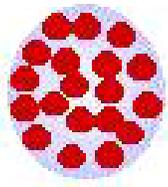
Plasmocytes



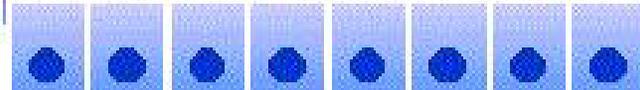
Macrophages



Cellules dendritiques



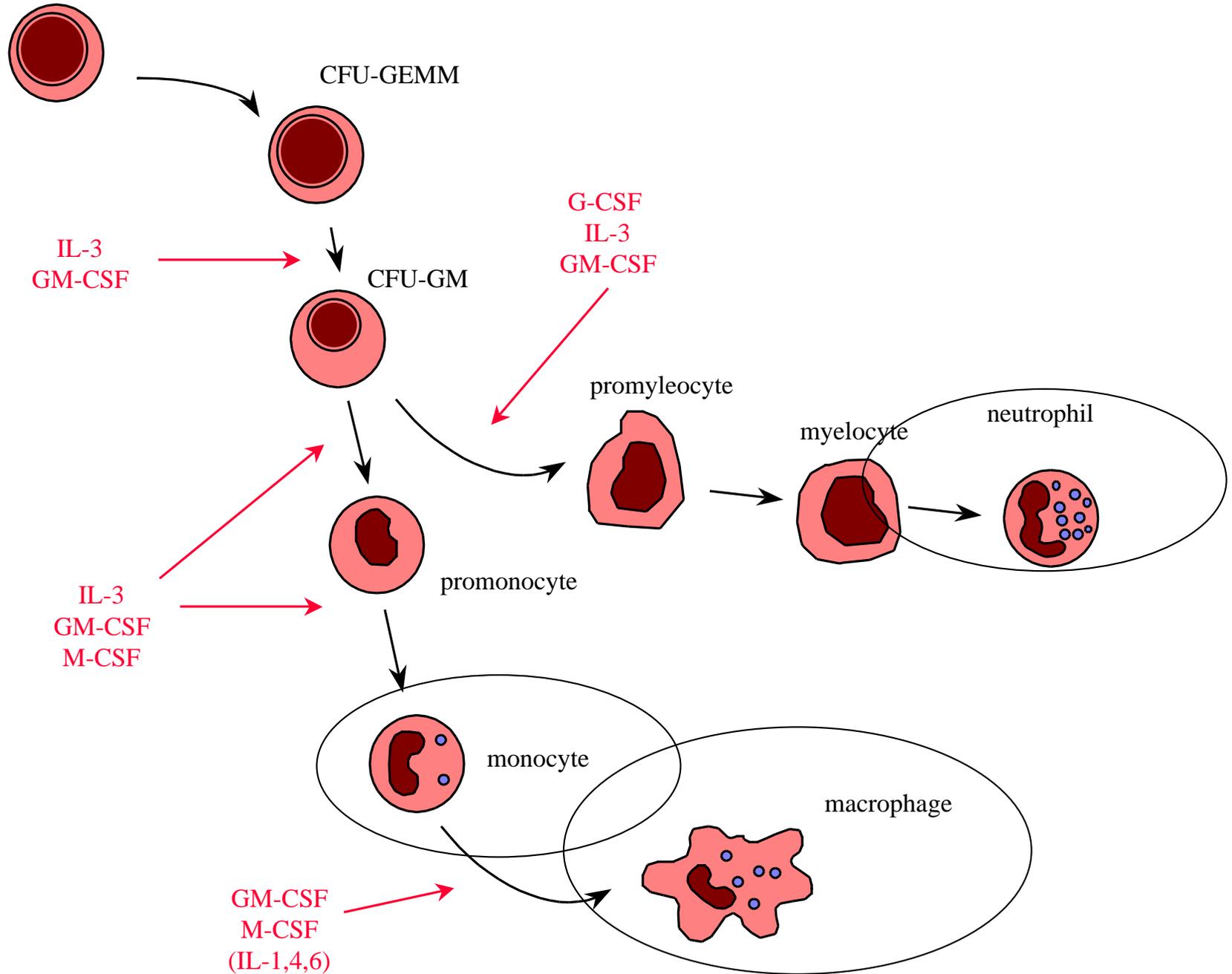
Mastocytes



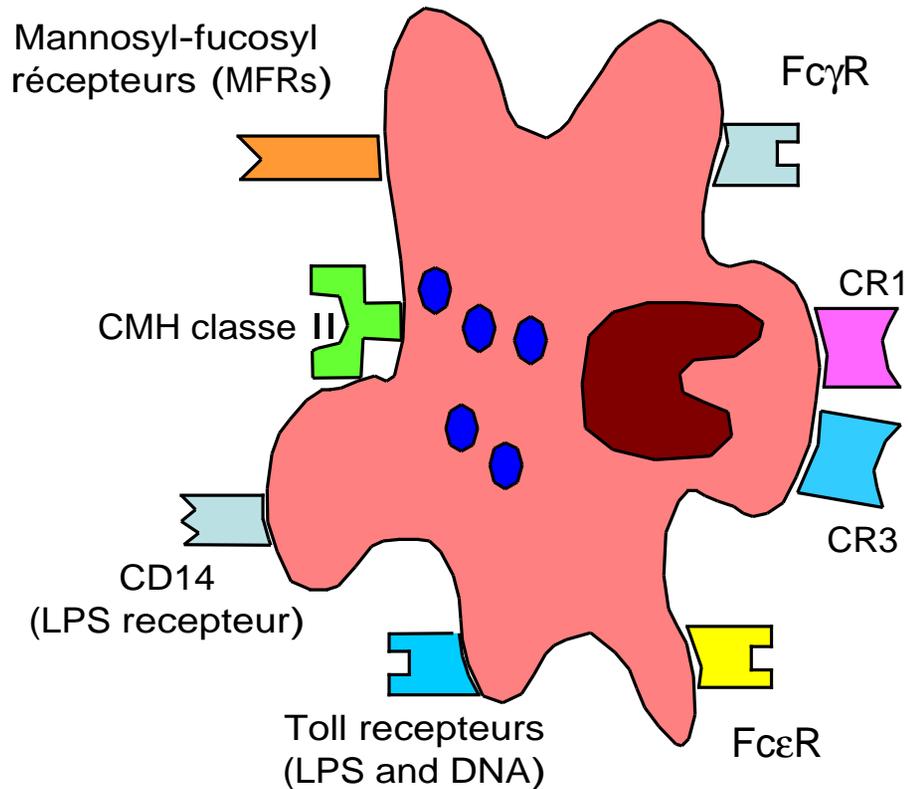
CELLULES EPITHELIALES

pluripotent haemopoietic stem cell

# Monocytes et macrophages



## Macrophages



**Mannosyl-fucosyl récepteurs** -association aux sucres en surface des  $\mu$ org et cellules effectrices (L)

**CD14** -récepteur lipopolysaccharide (LPS)

**Toll récepteurs** - récepteurs de LPS et ADN microbien

**Récepteurs Fc** - association à l'Ig à la surface du  $\mu$ org déclenchant la phagocytose

**Récepteurs de Complément** - liaison au complément fixé à la surface du  $\mu$ org

**CMH classe II** -présentation d'Ag aux cellules T