

SISTEMA IMMUNOLOGICO



Red blood cells

Eosinophil

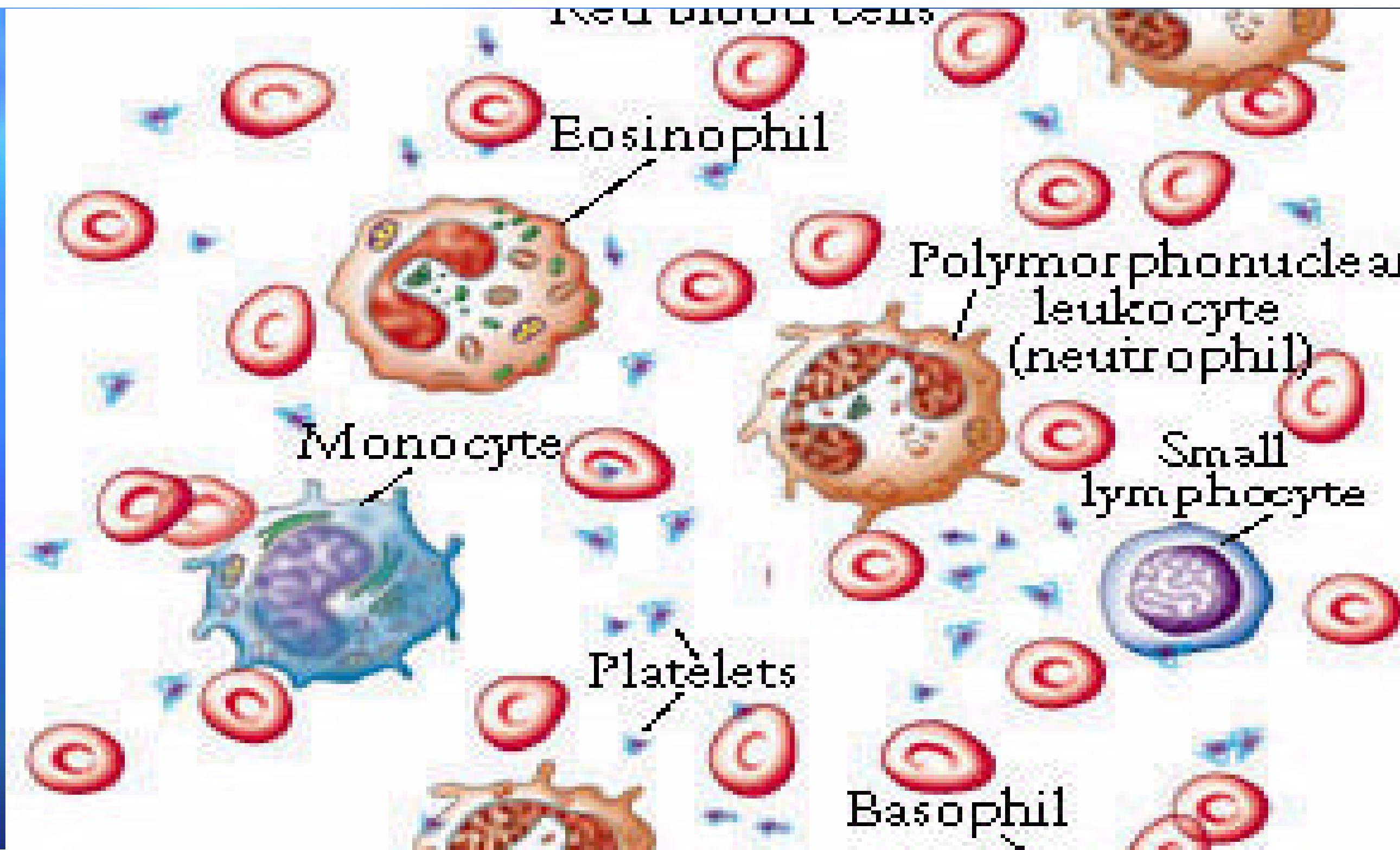
Polymorphonuclear
leukocyte
(neutrophil)

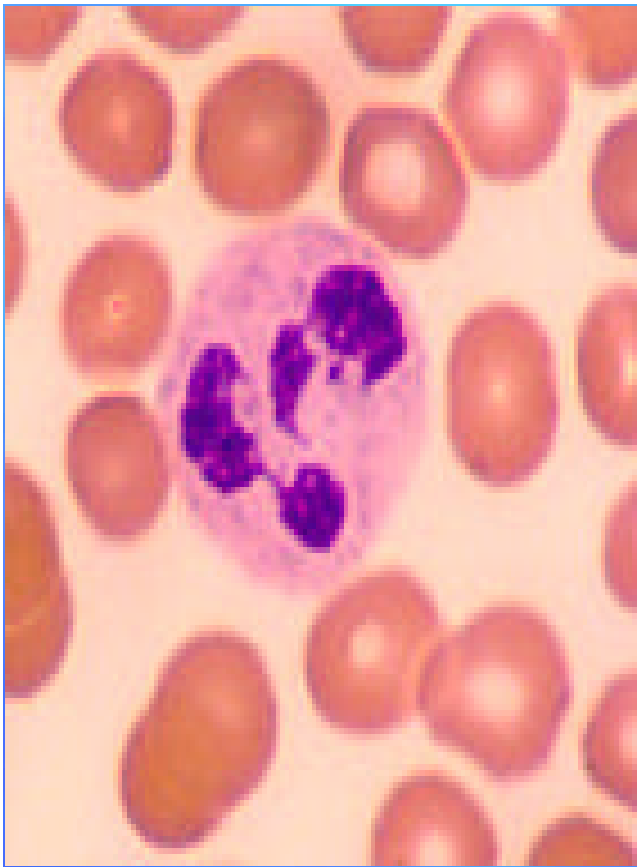
Monocyte

Small
lymphocyte

Platelets

Basophil

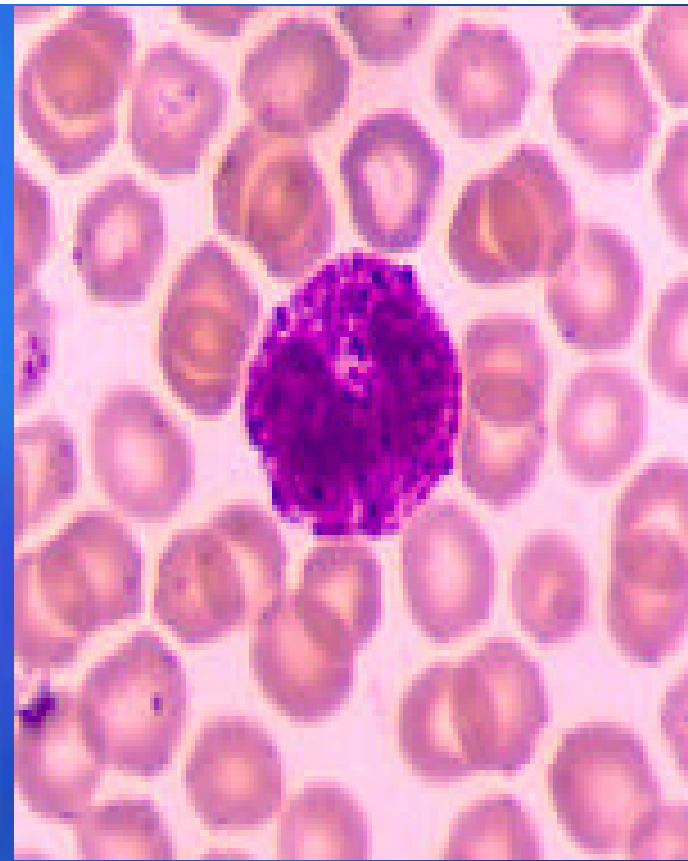




neutrofilo

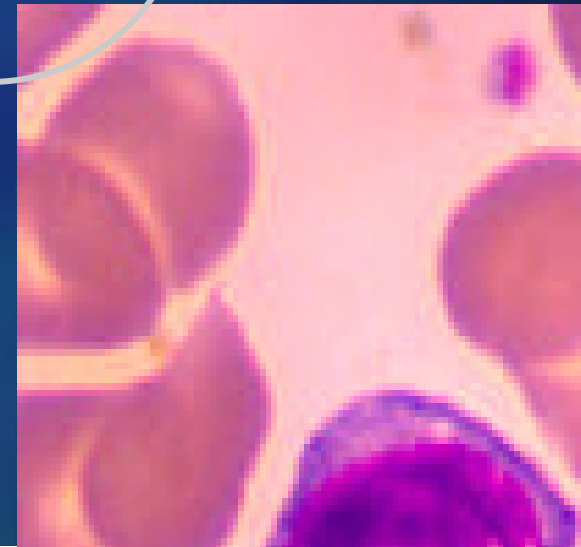
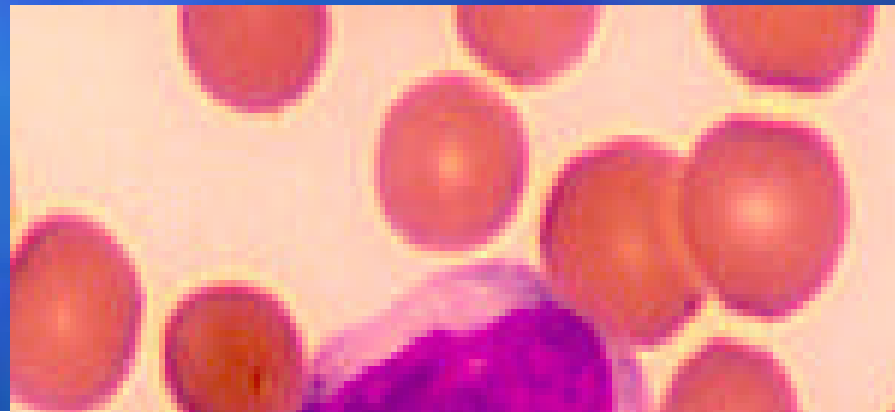


eosinofilo



basofilo

Granuli

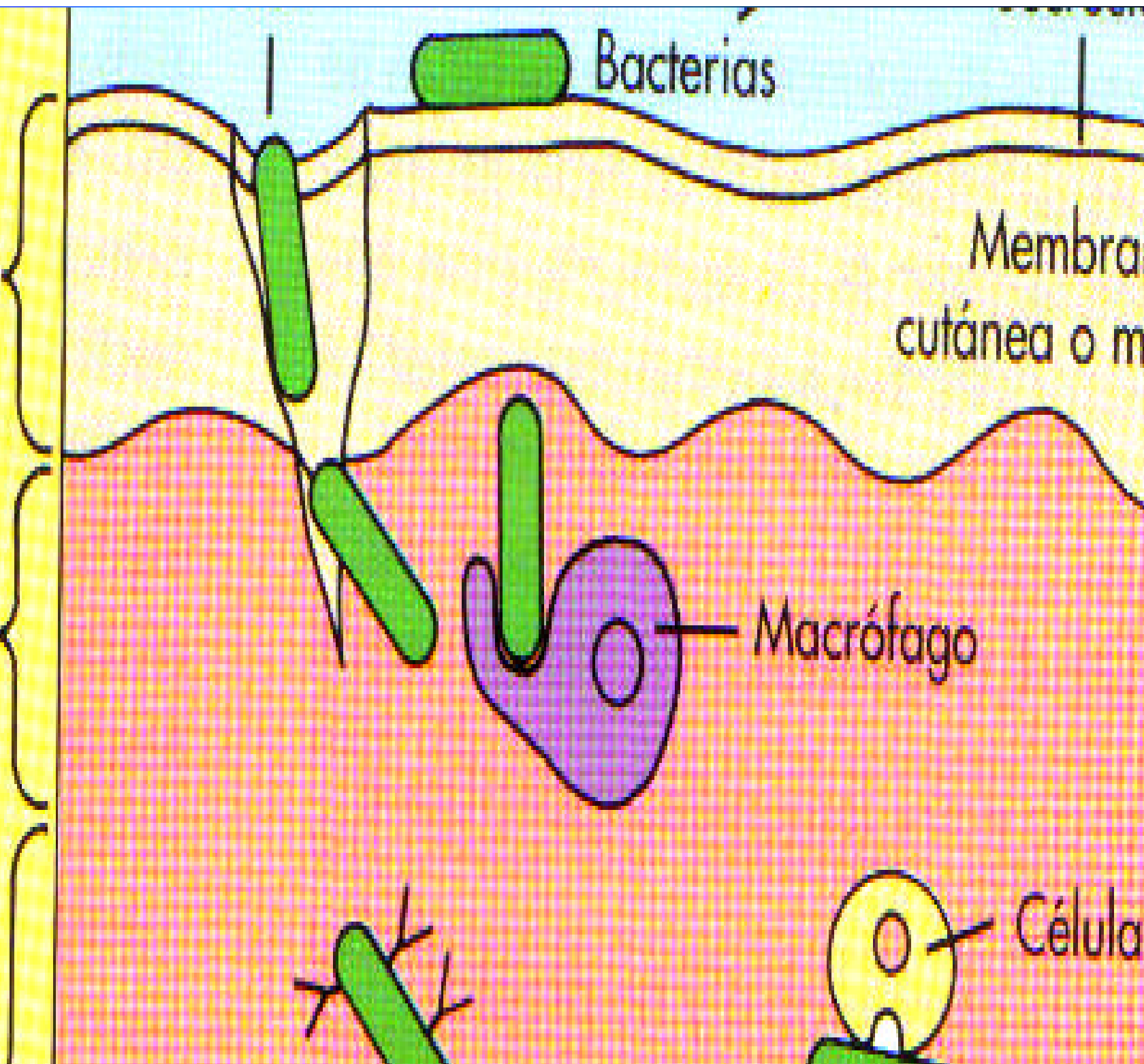


- HAY DOS CLASES PRINCIPALES DE MECANISMOS INMUNITARIOS
 - **IMMUNIDAD INNATA O INESPECIFICA**
 - PROPORCIONA DEFENSA GENERAL FRENTE A CUALQUIER AGENTE EXOGENO
 - **INMUNIDAD ADQUIRIDA O ESPECIFICA**

Primera línea de defensa
Barreras mecánicas
Barreras químicas

Segunda línea de defensa
Respuesta inflamatoria
Leucocitosis

Tercera línea de defensa



Primera línea de defensa

– Piel

- **Keratina**
- **Acidez**
- **cebo**

– Mucosa

■ Segunda línea de de defens

– Fagocitos

- **Macrófagos**
- **Neutrófilos**
- **NK**

– Inflamación

LEUCOCITOS

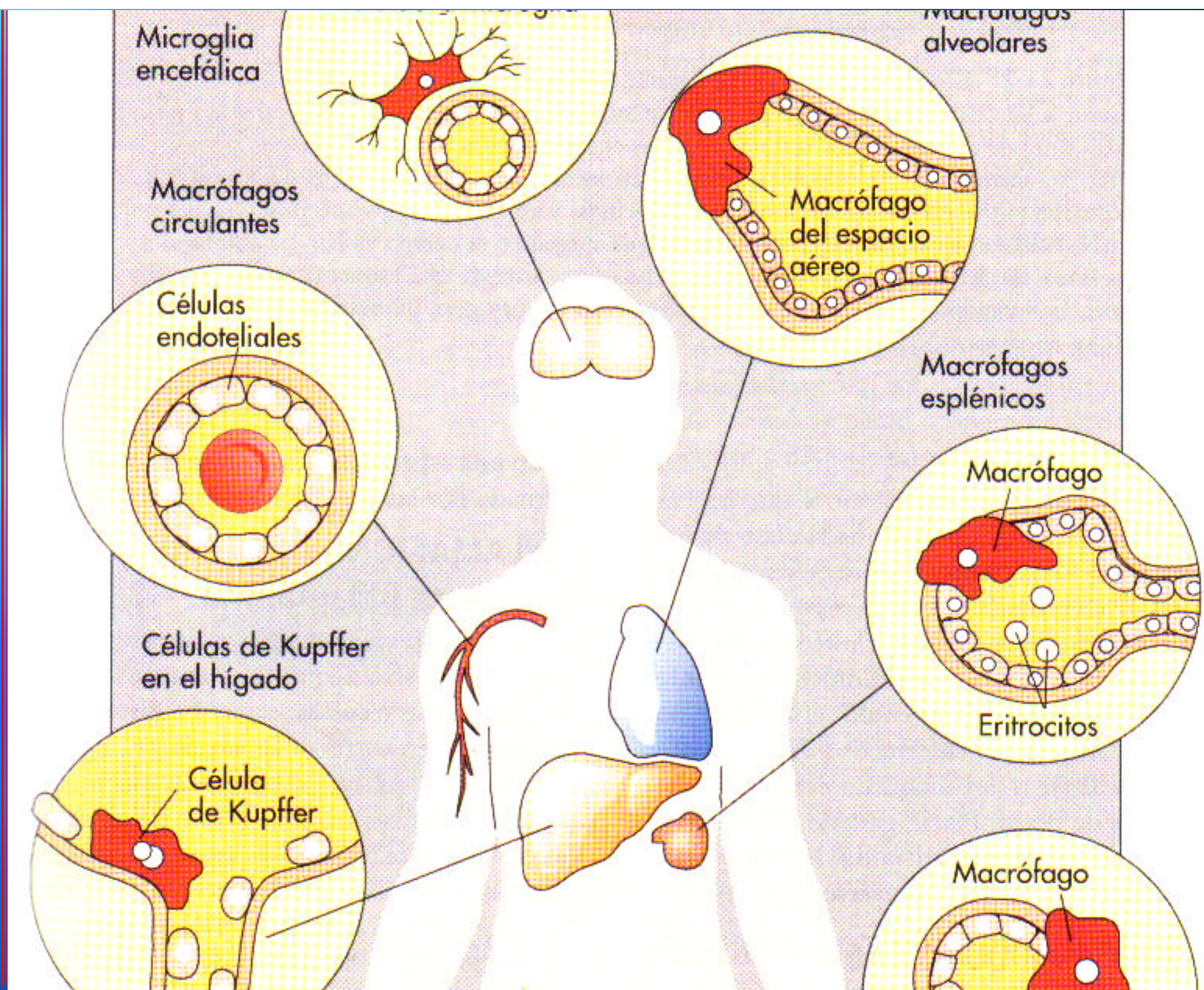
**FAGOCITOS MAS
NUMEROSOS**

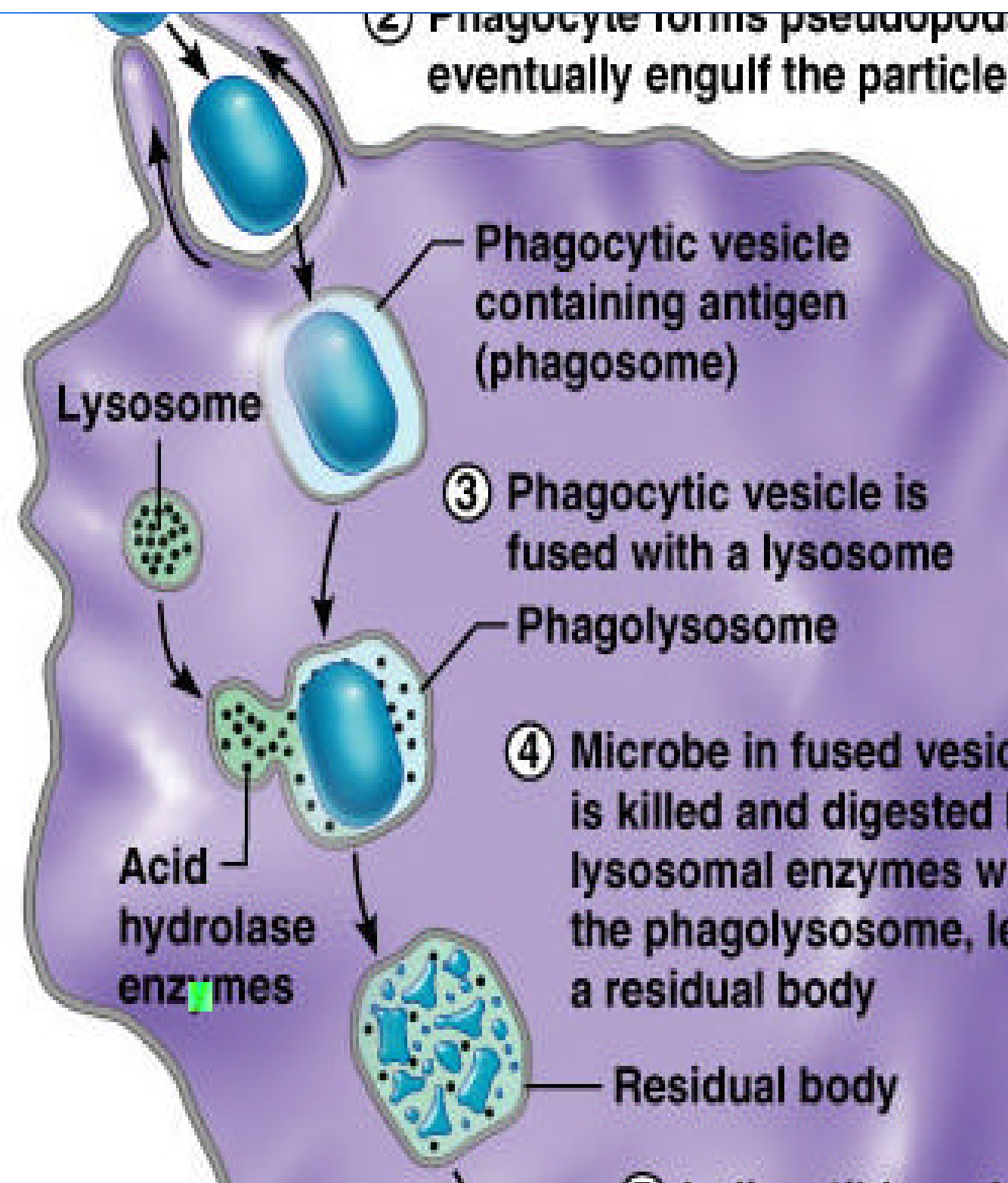
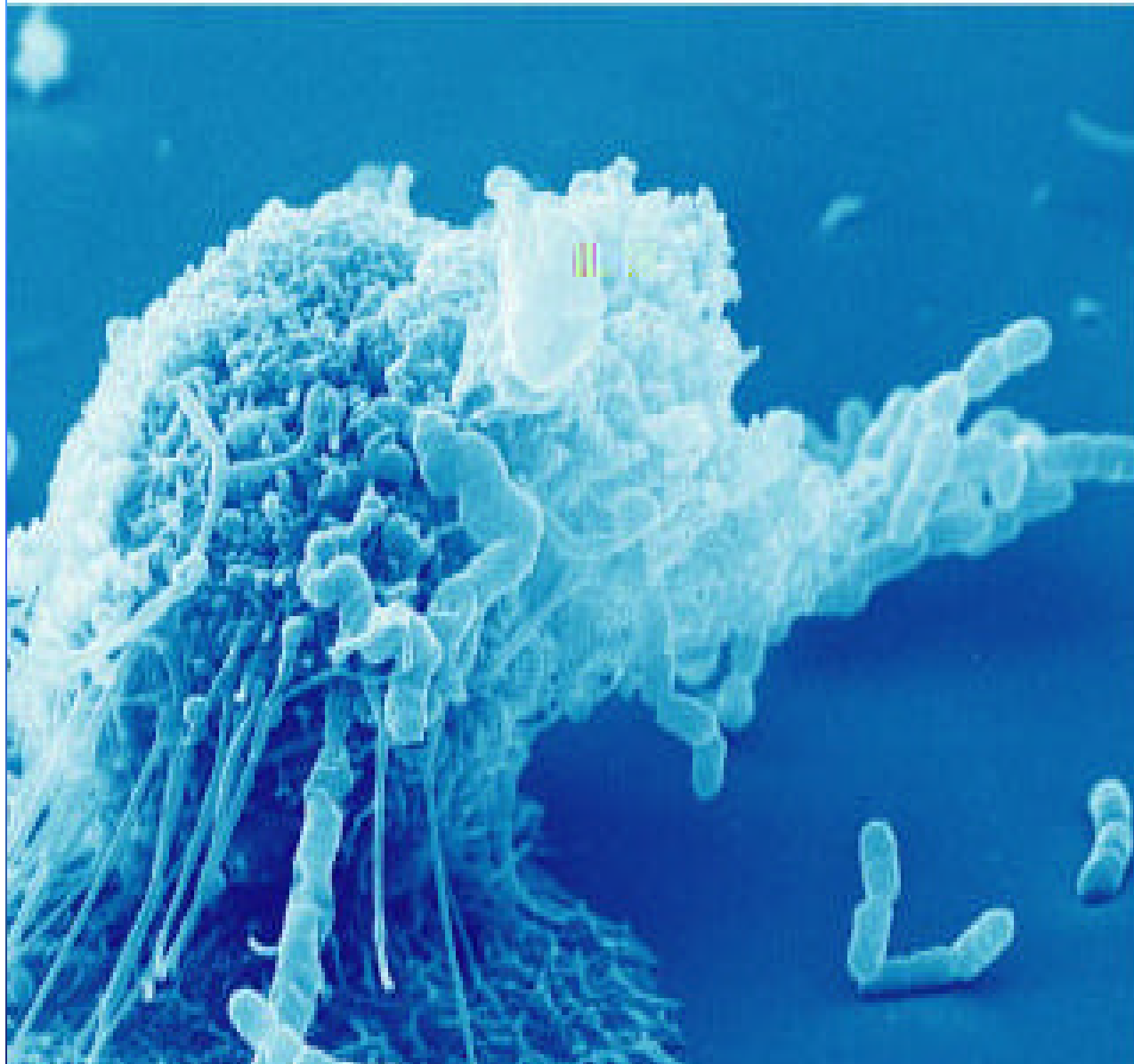
**PRIMEROS EN
LLEGAR AL LUGAR DE
LESION POR
DIAPYCNOSIS**

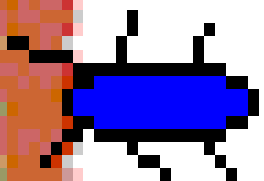
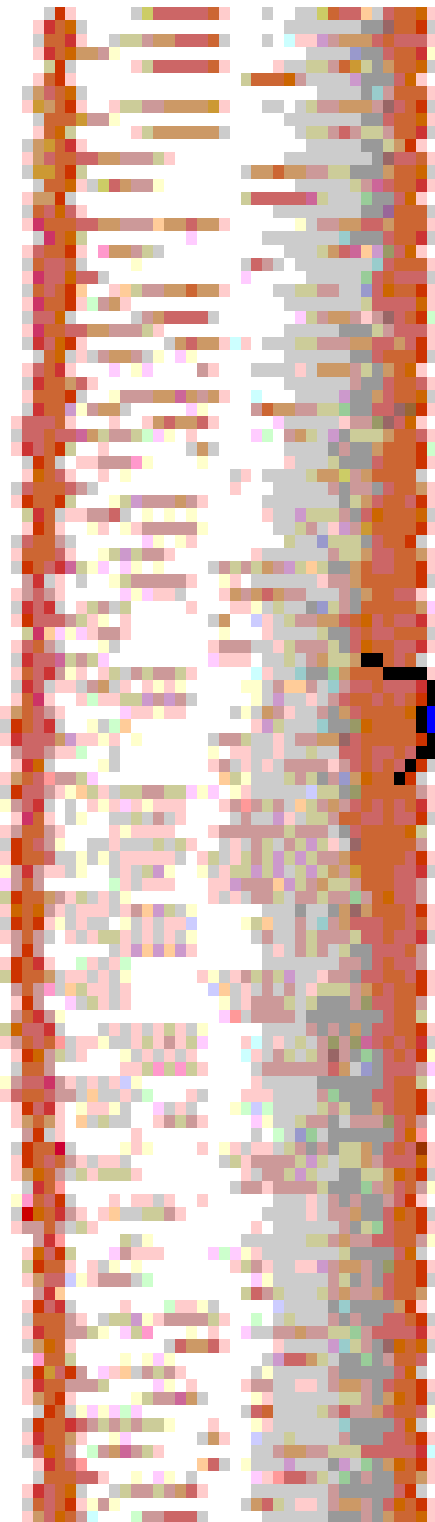
[http://www.beelib.com/b
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ee/movies/movie13.mov)

ACROFAGOS









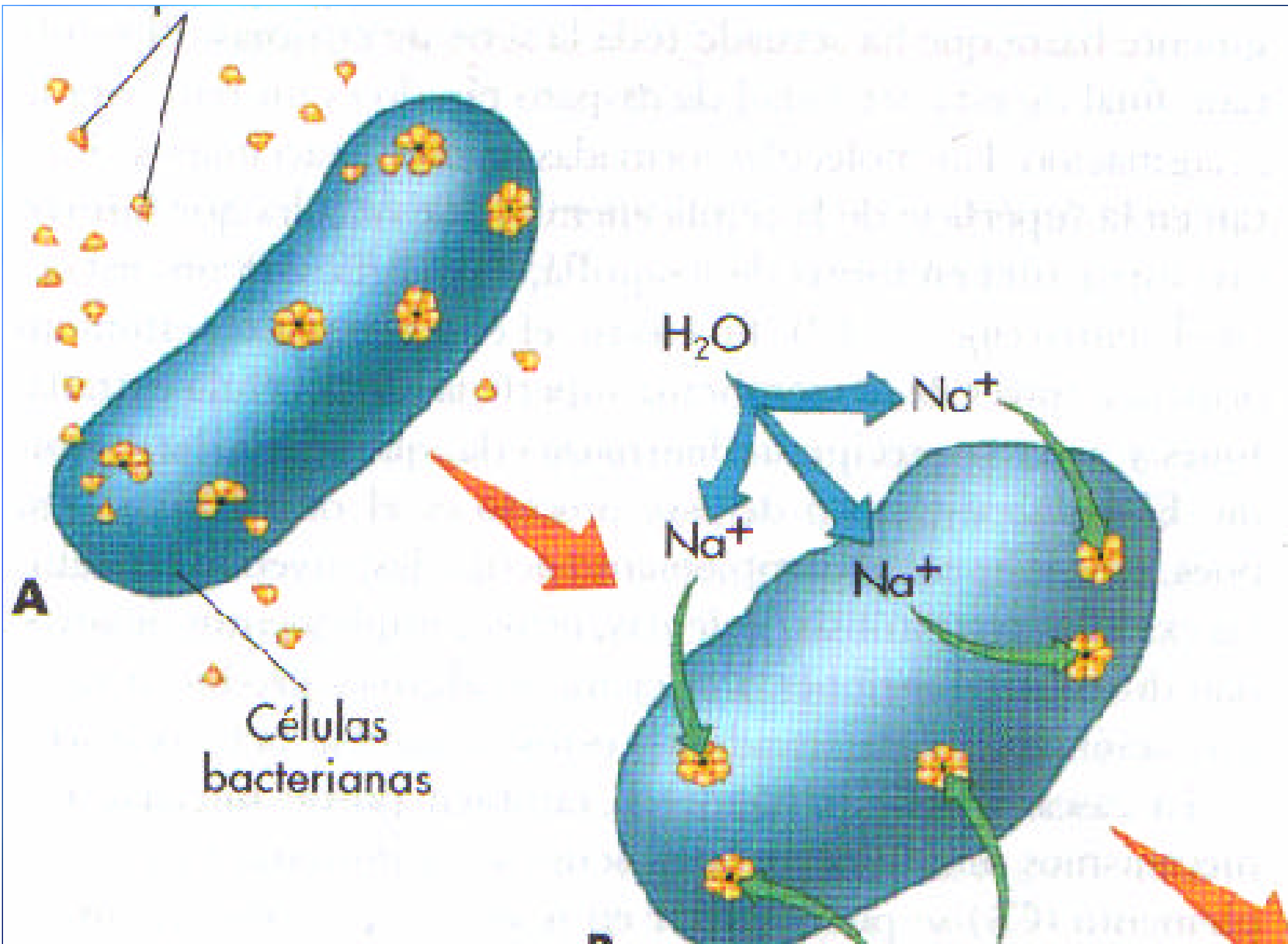
- LINFOCITOS QUE DESTRUYEN CELULAS TUMORALES E INFECTADAS POR VIRUS

INTERFERON

- PROTEINA SINTETIZADA Y LIBERADA A CIRCULACION POR CIERTAS CELULAS CUANDO SON INVADIDAS POR LOS VIRUS

COMPLEMENTO

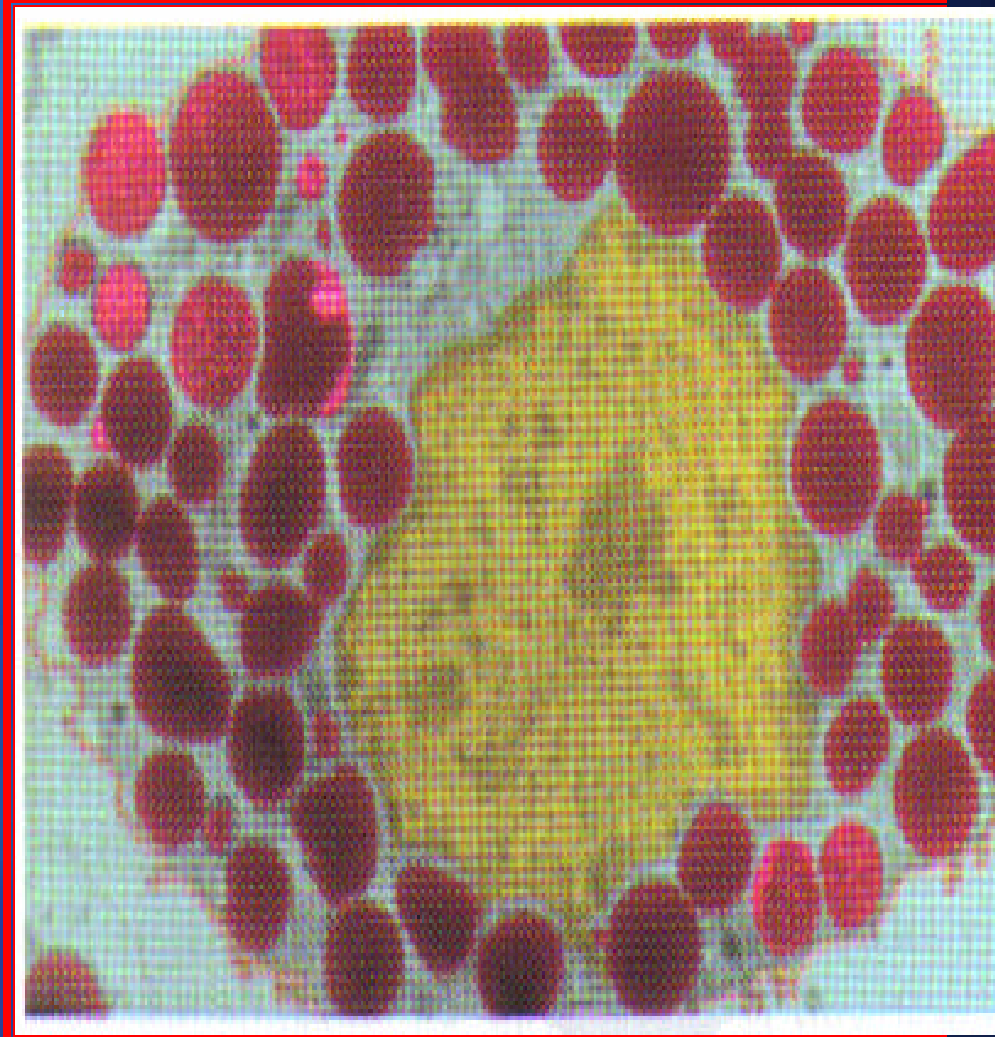
GRUPO DE ENZIMAS QUE LICAN CELULA

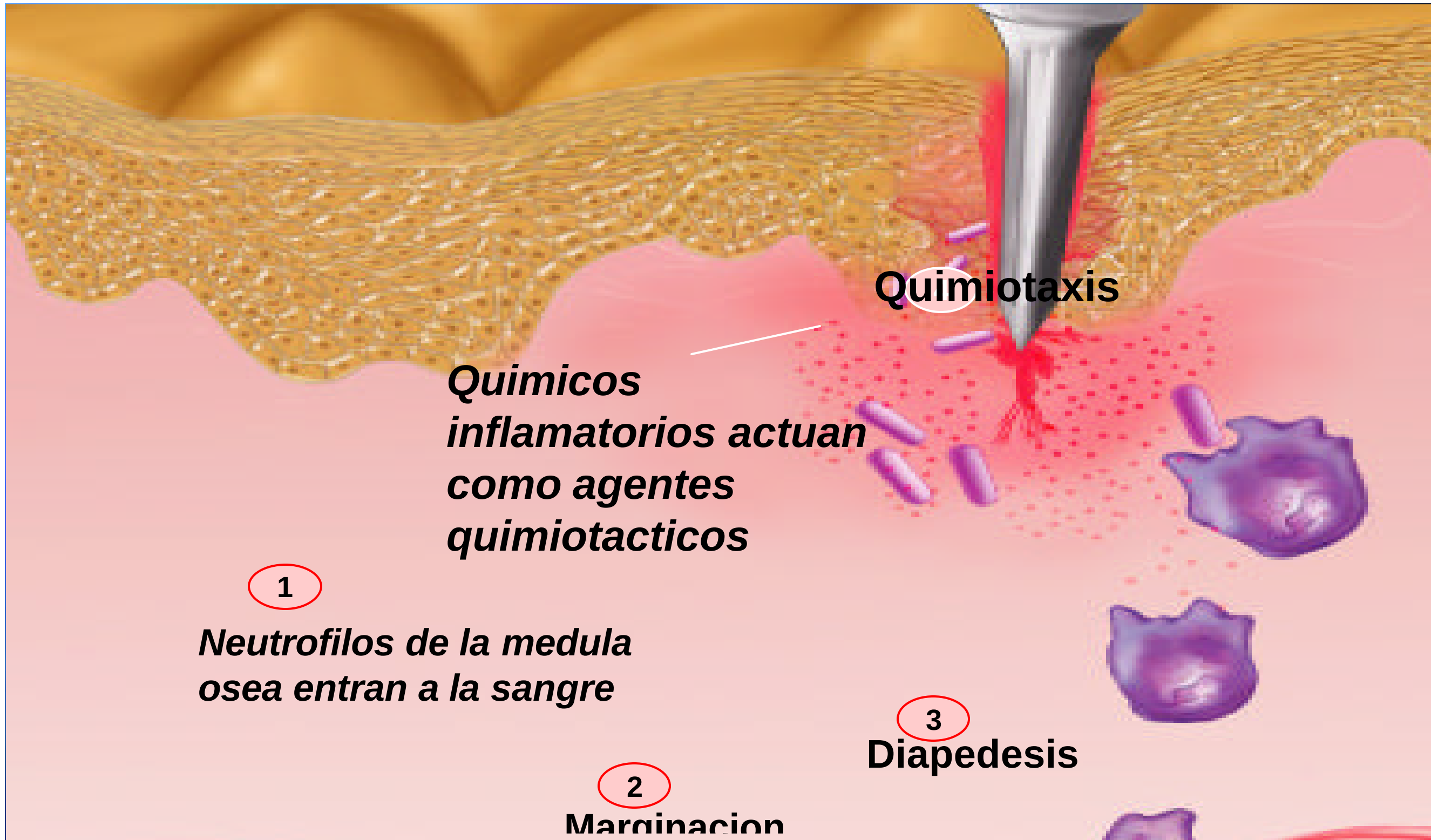


**INTERMEDIARIOS DE LA
RESPUESTA
INFLAMATORIA**

**HISTAMINA,
PROSTAGLANDINAS,
ETC**

**FACTORES
QUIMIOTACTICOS
QUIMIOTAXIS**





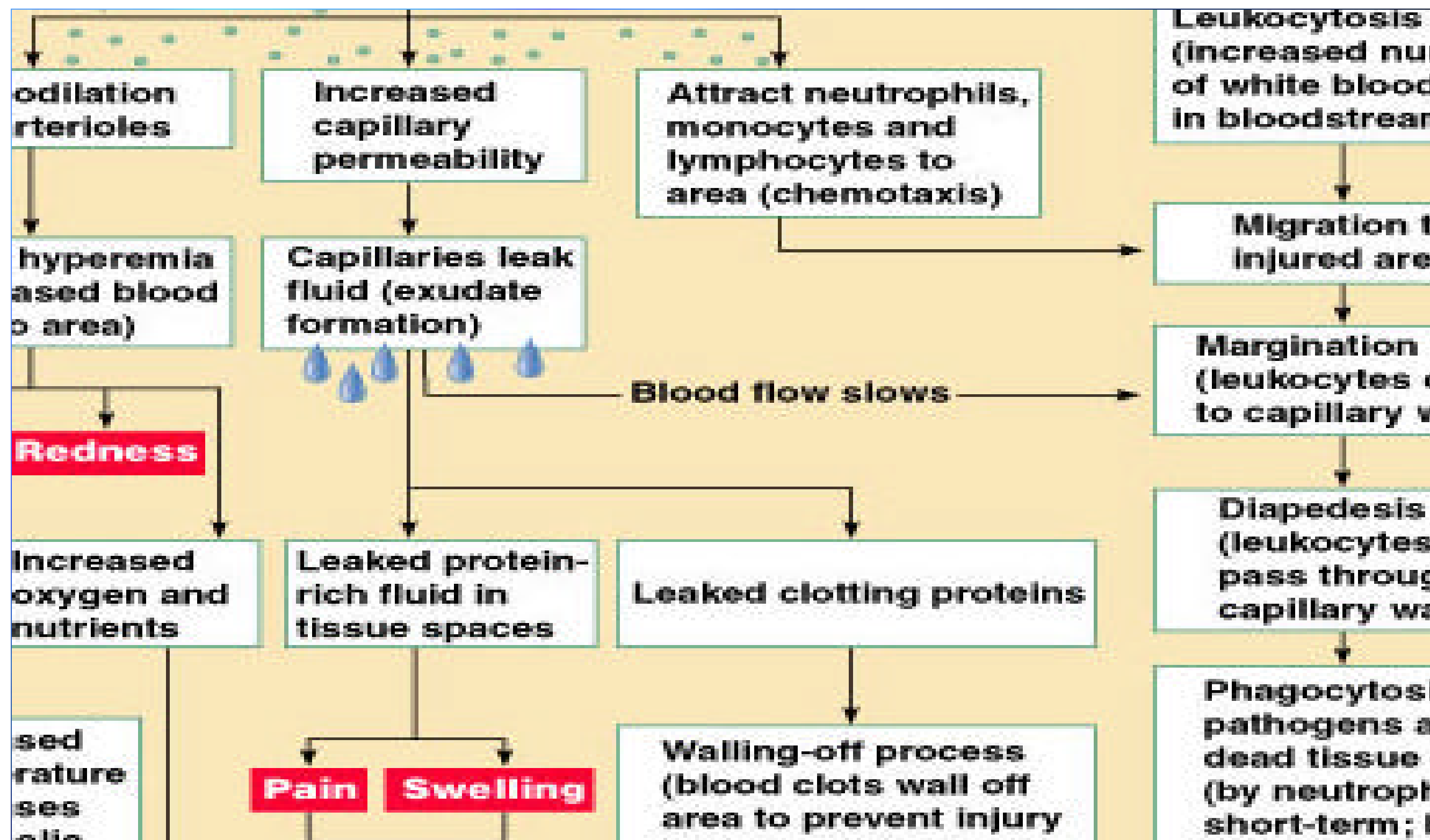
Quimiotaxis

Quimicos inflamatorios actúan como agentes quimiotácticos

1
Neutrofilos de la medula osea entran a la sangre

2
Marginacion

3
Diapedesis

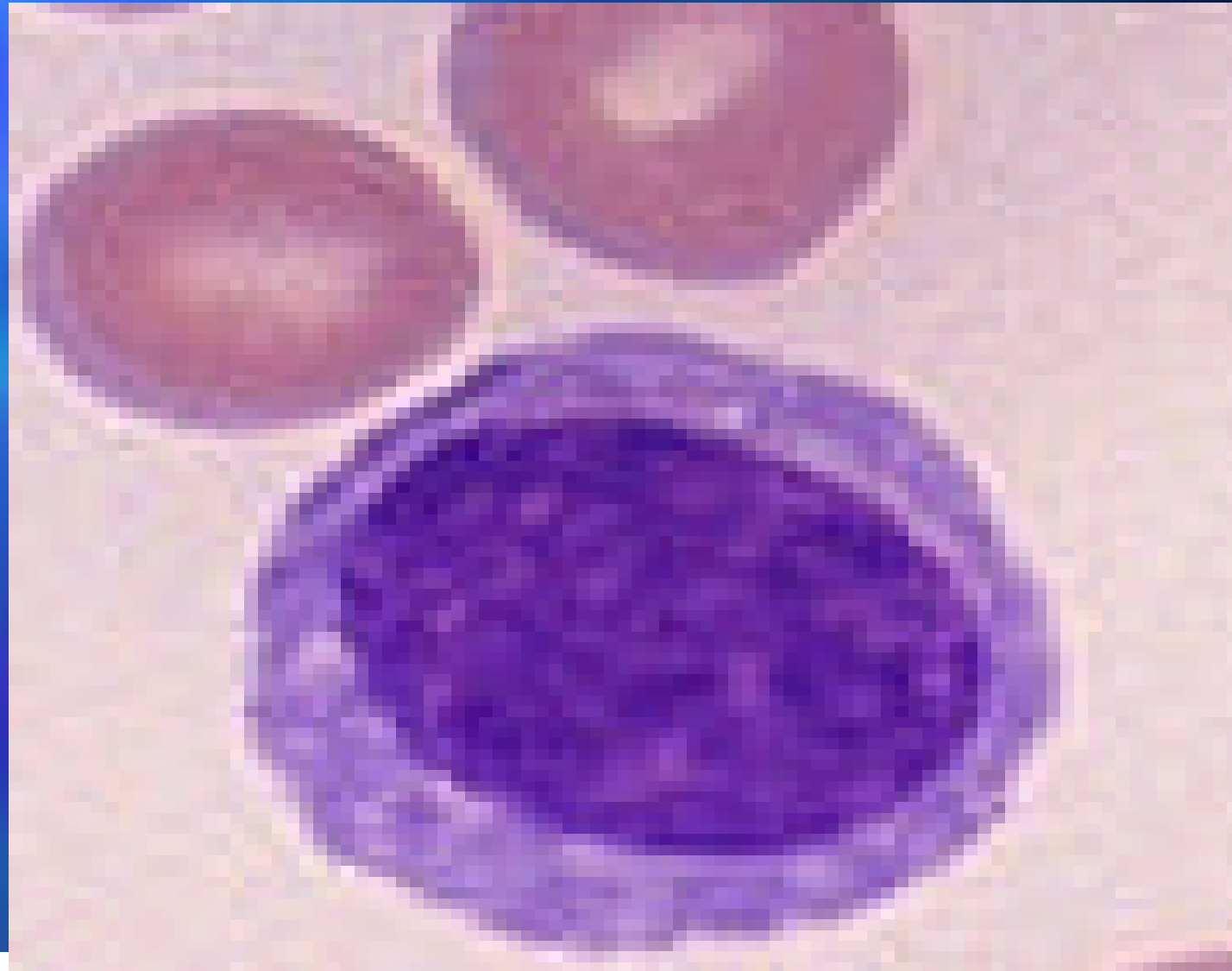


TERCERA LINEA DE DEFENSA

INFOCITOS

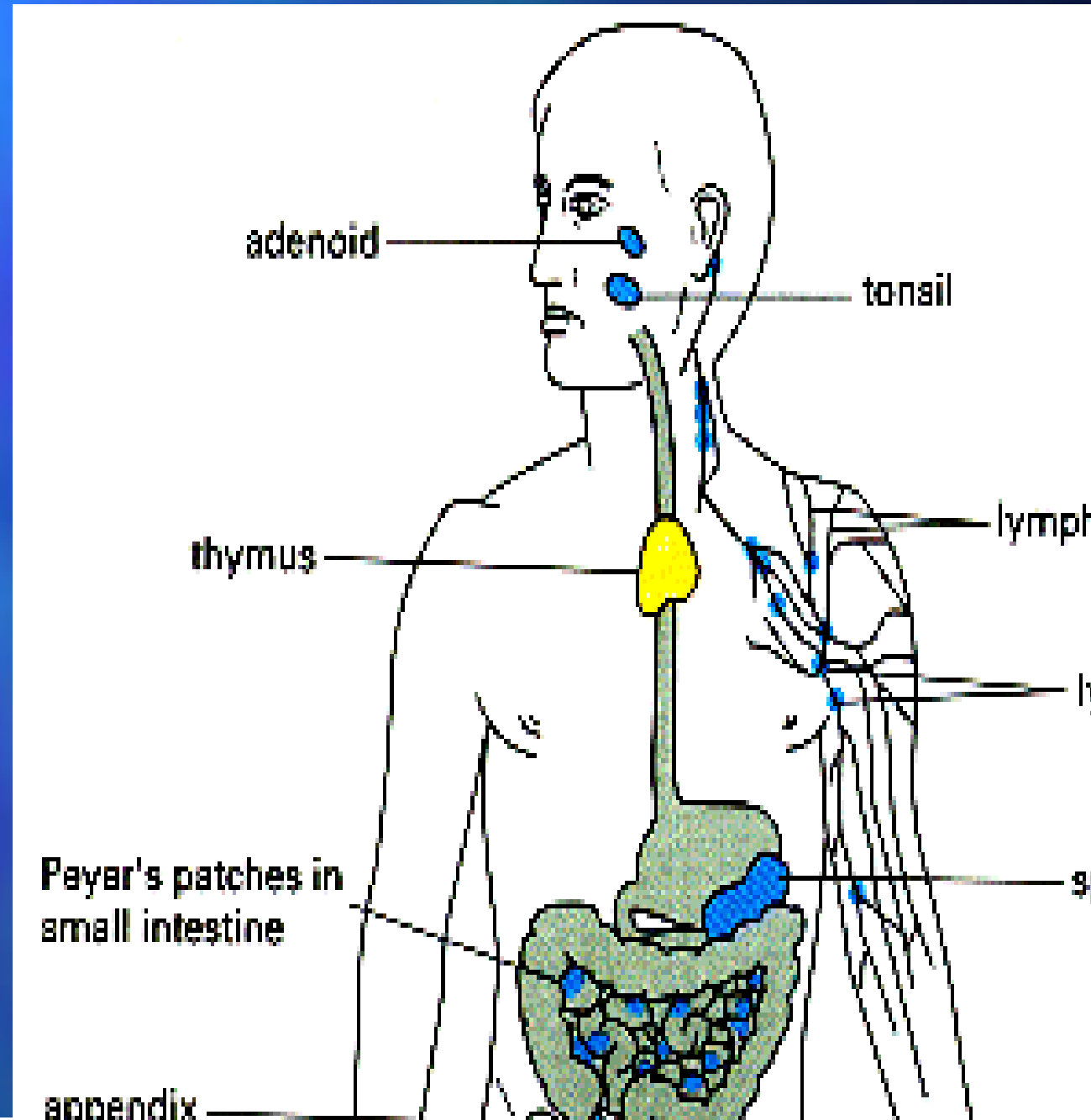
CELULAS T Y

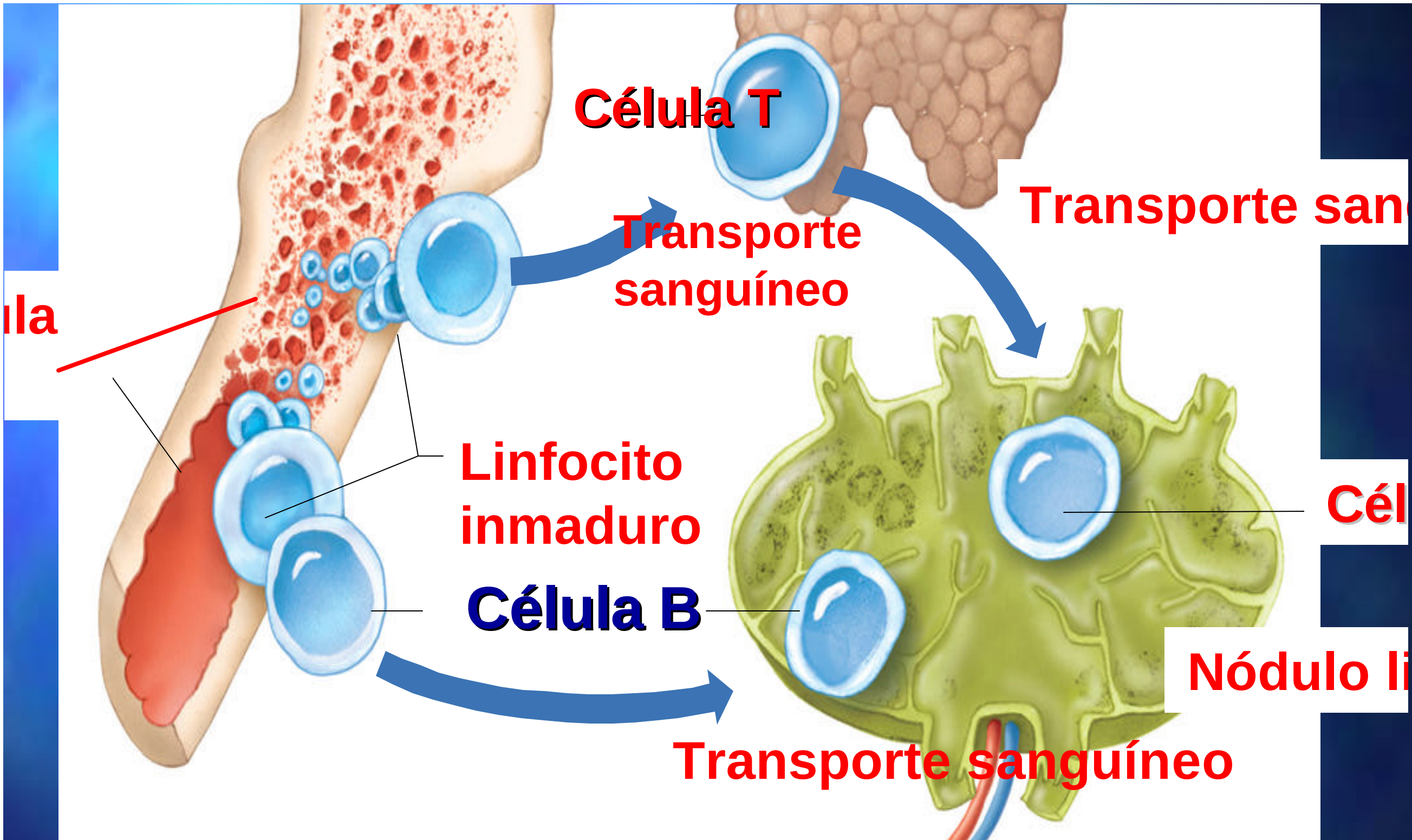
CELULAS B



IRCULAN EN EL
ORRENTE
ANGUINEO
DIAPEDESES
ELULAS B
ANTICUERPOS
ELULAS T
ATACAN
DIRECTAMENTE A

BAZO





la

Célula T

Transporte sanguíneo

Transporte san

Linfocito inmaduro

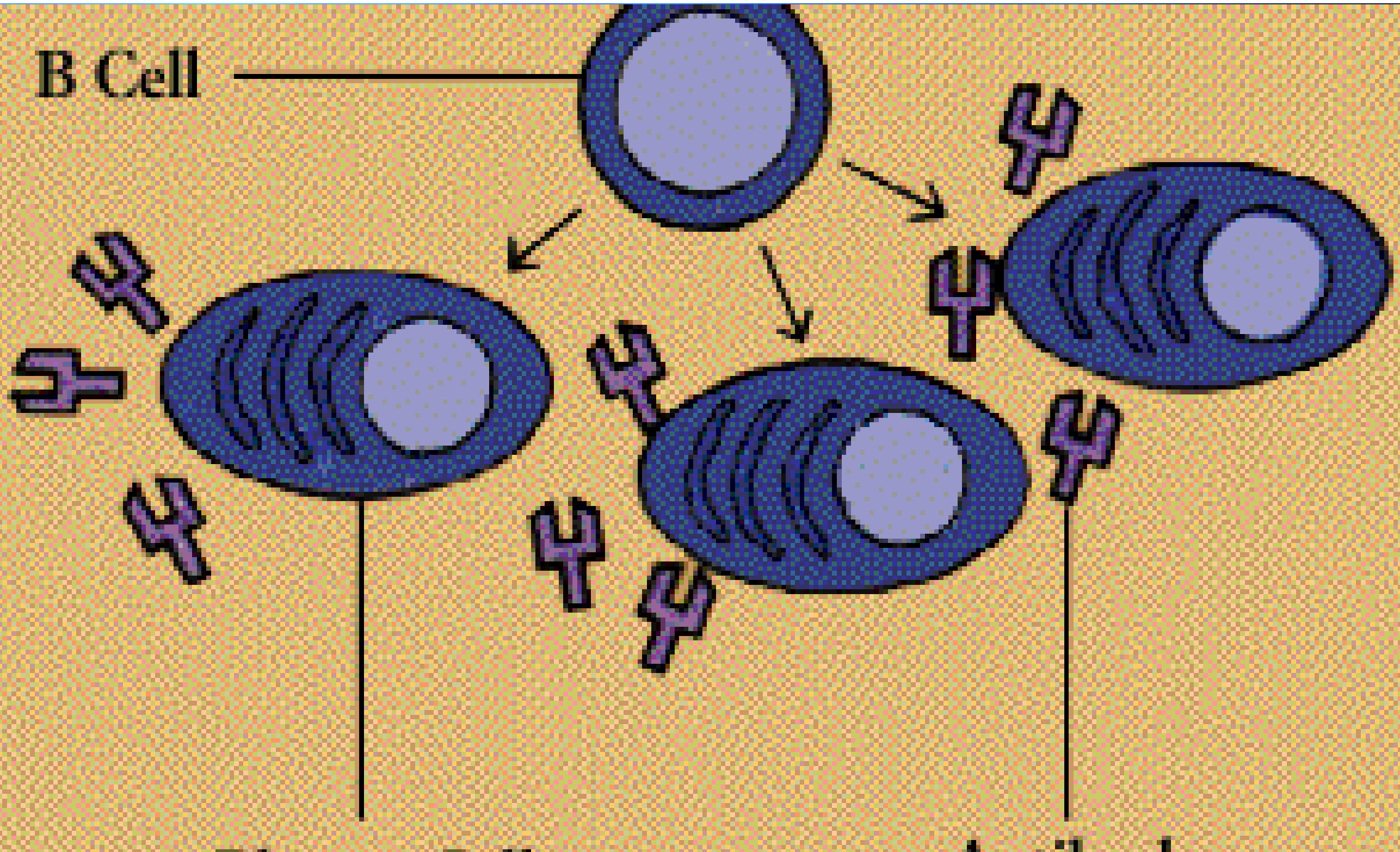
Célula B

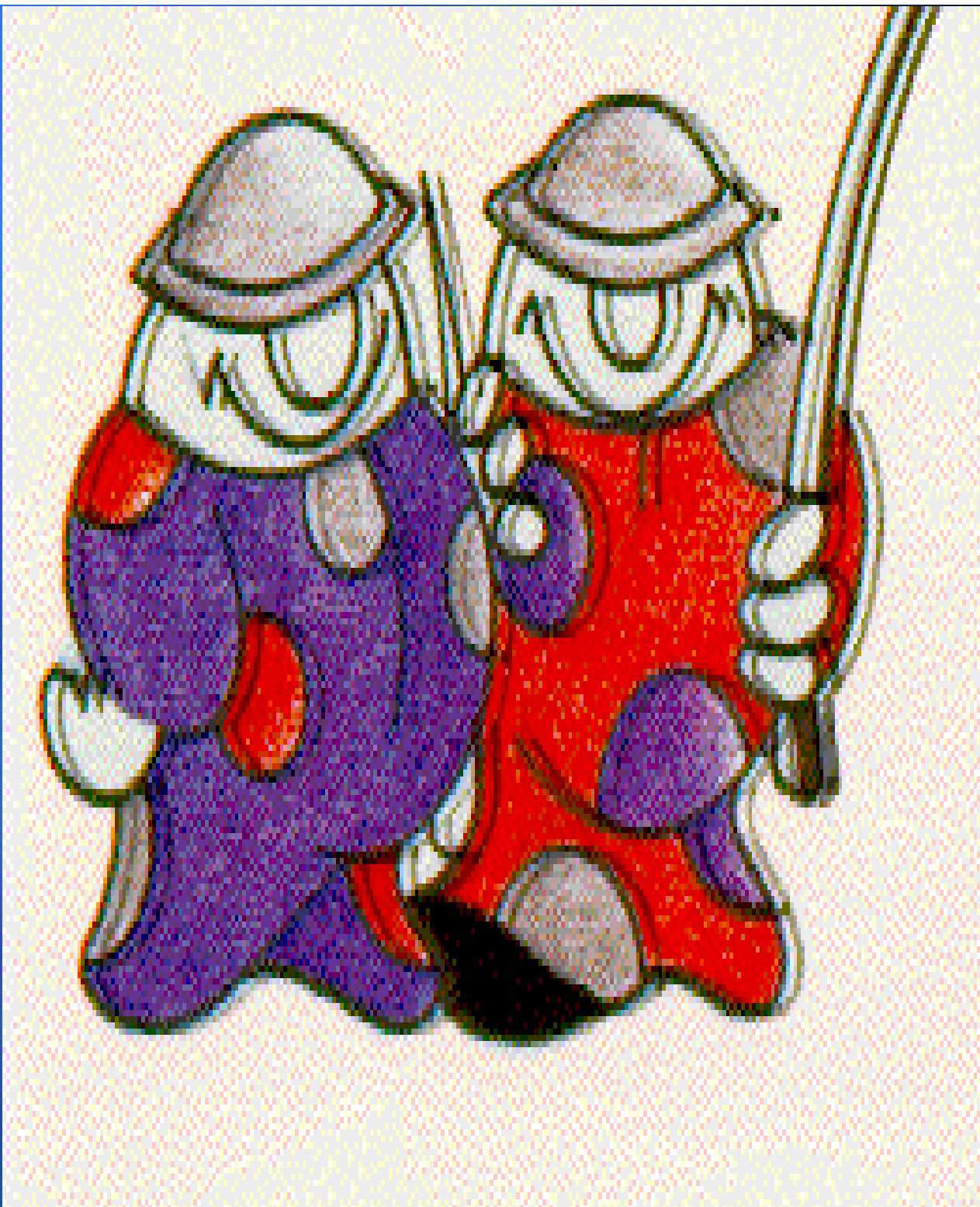
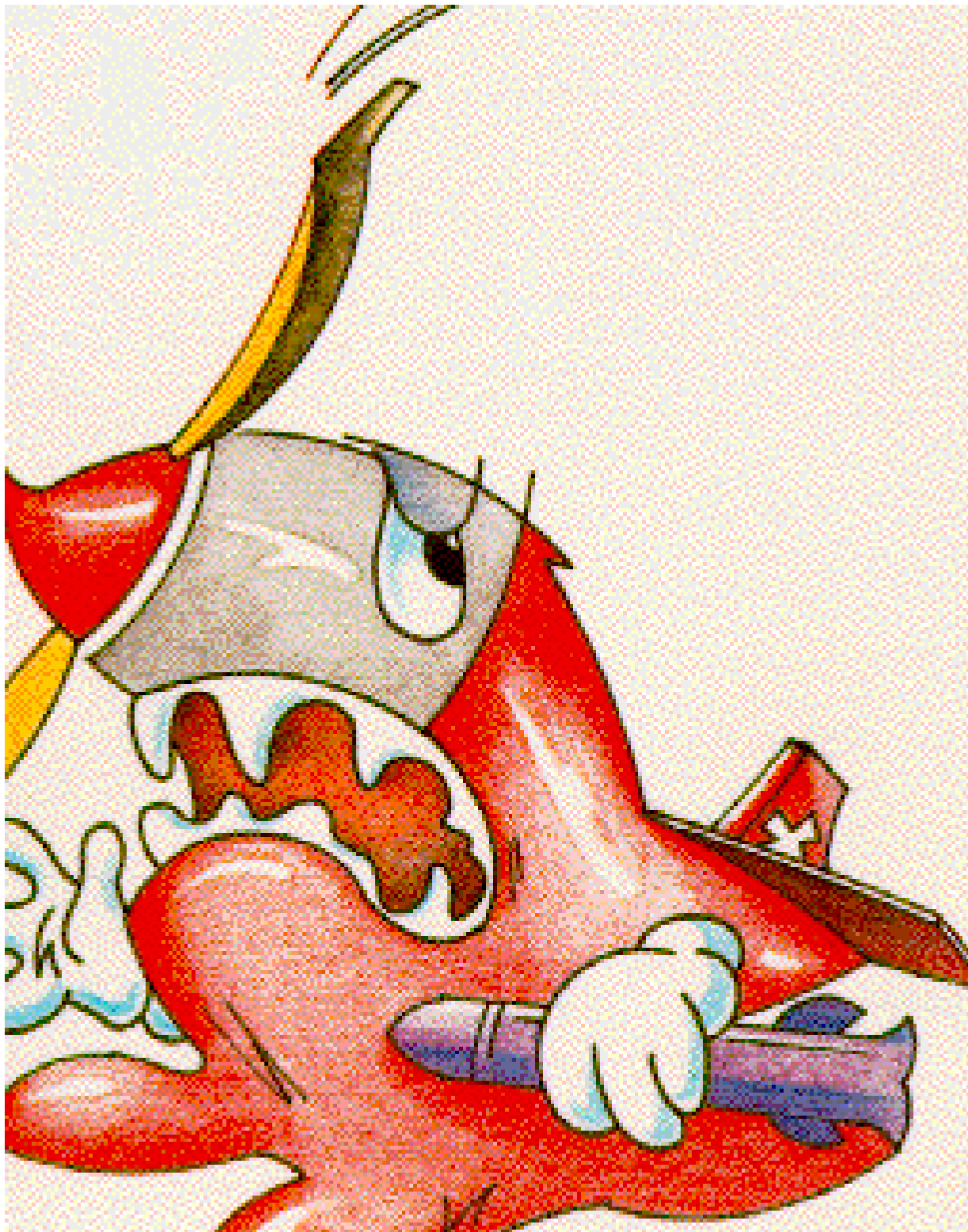
Cél

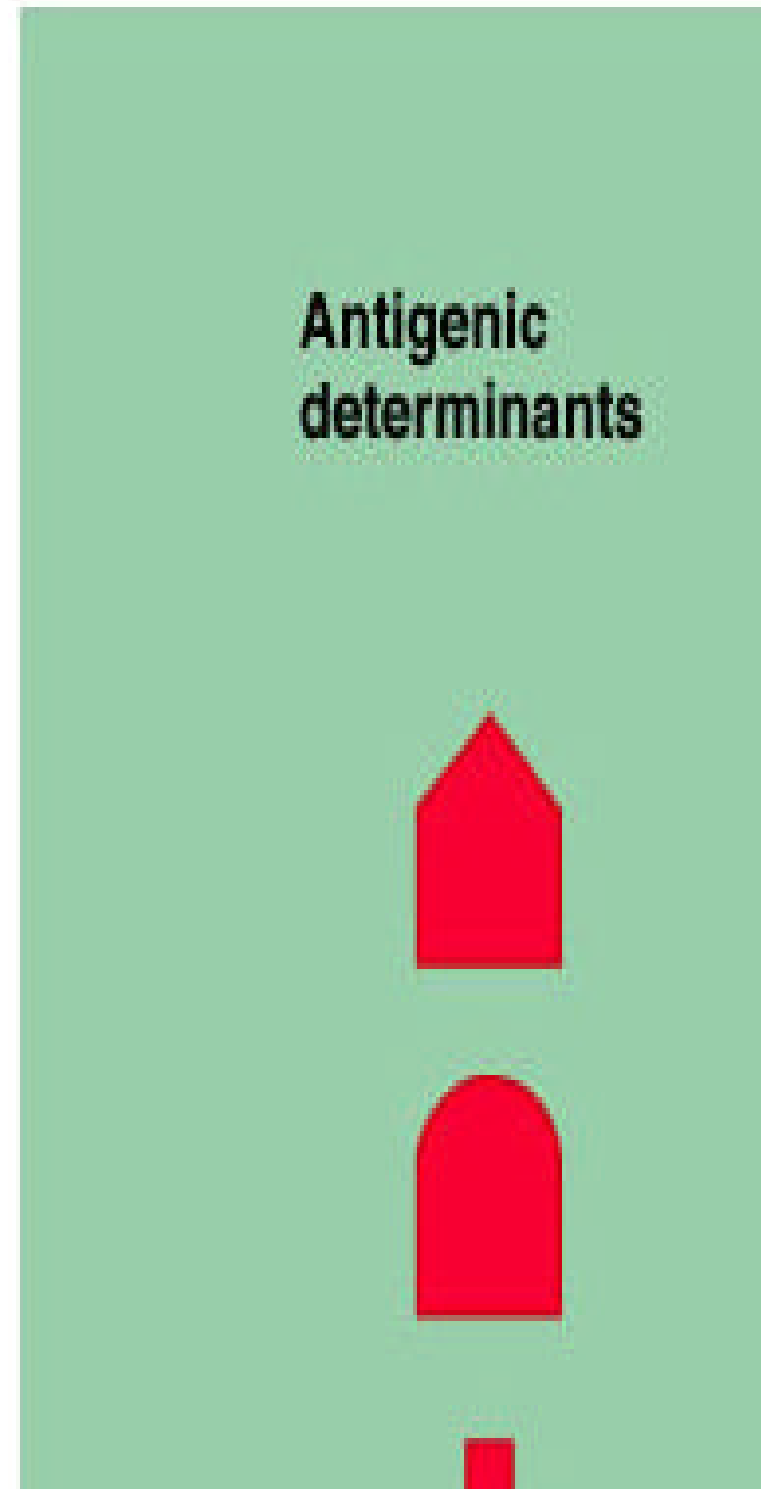
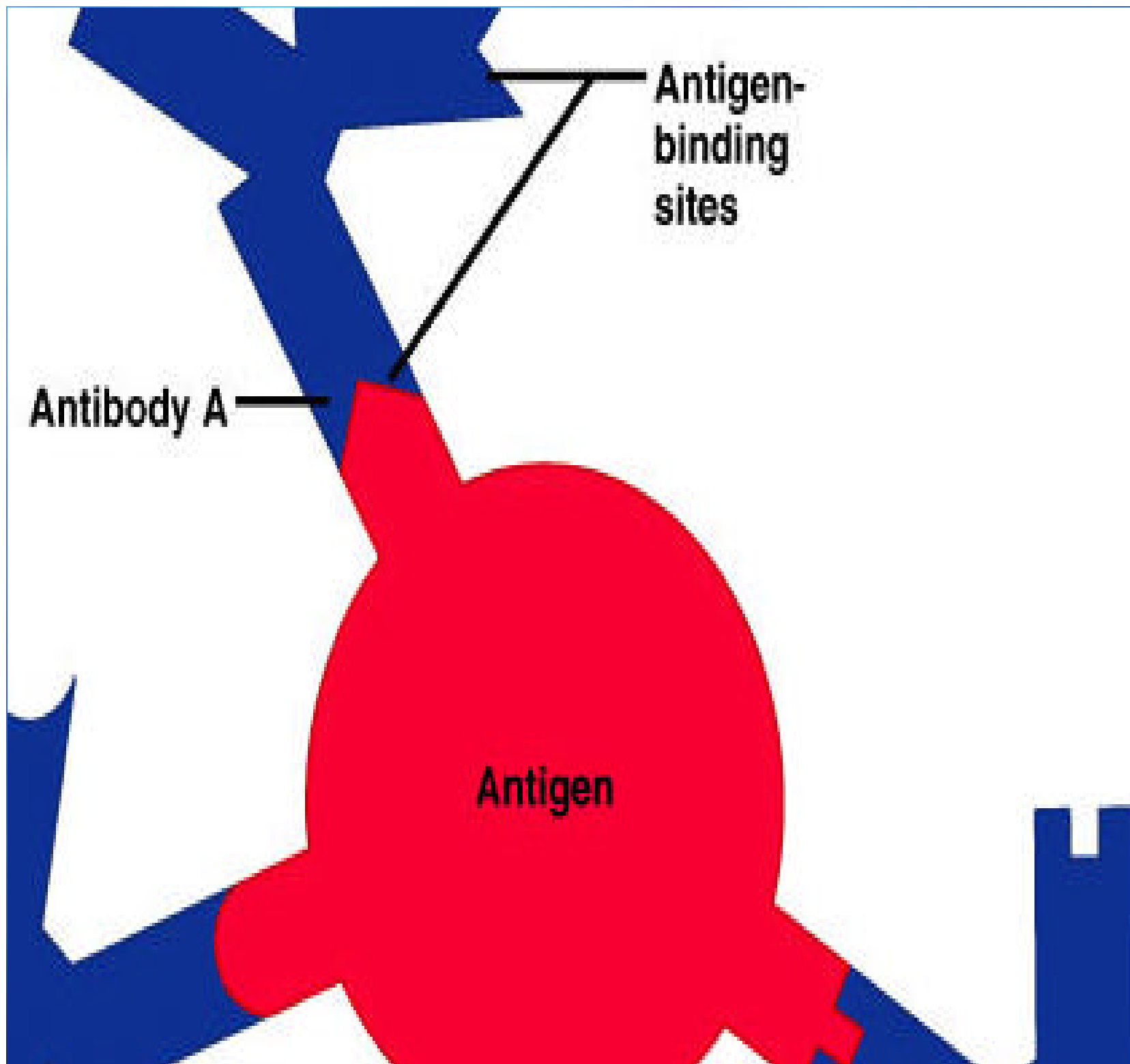
Nódulo li

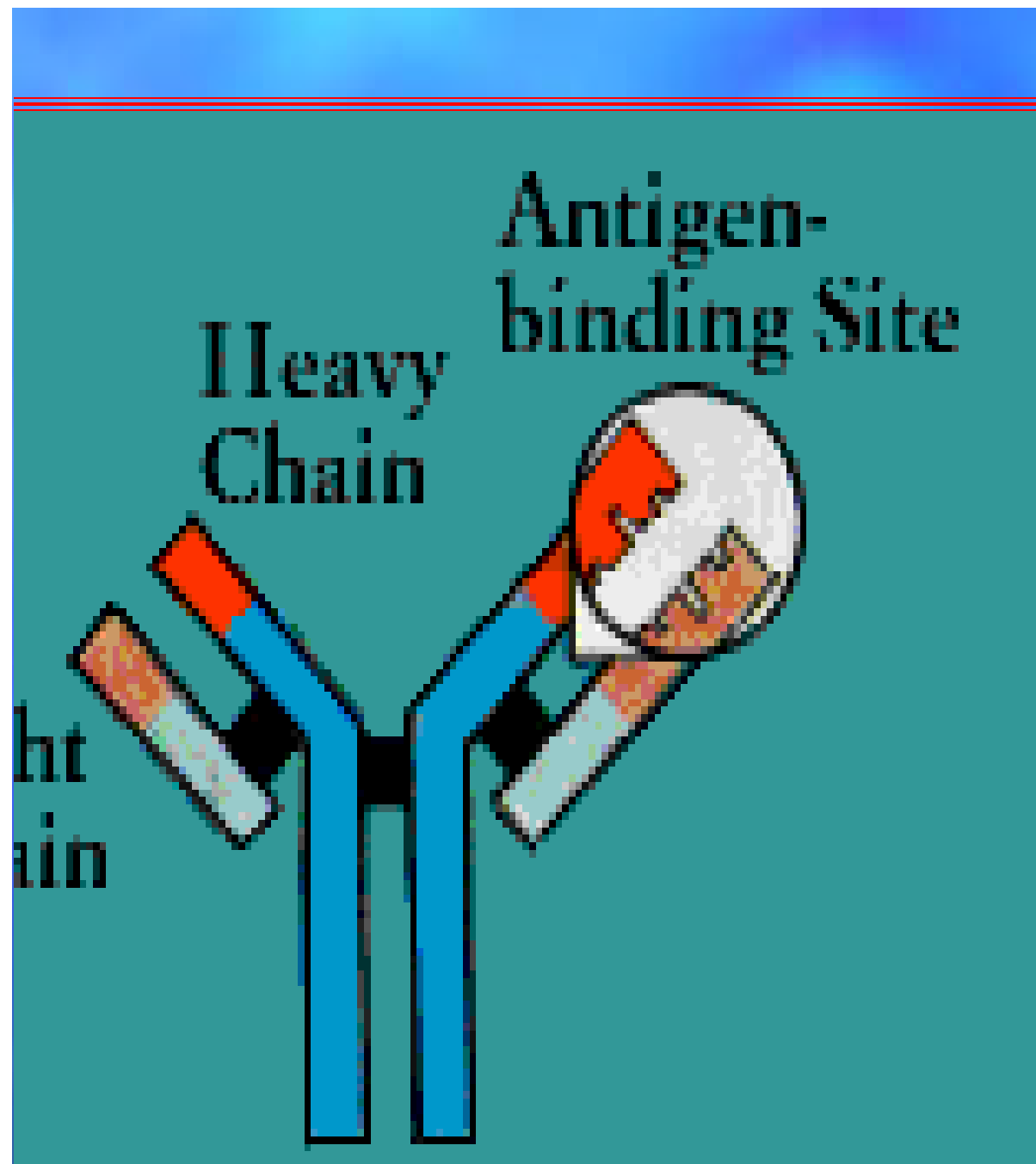
Transporte sanguíneo

B Cell



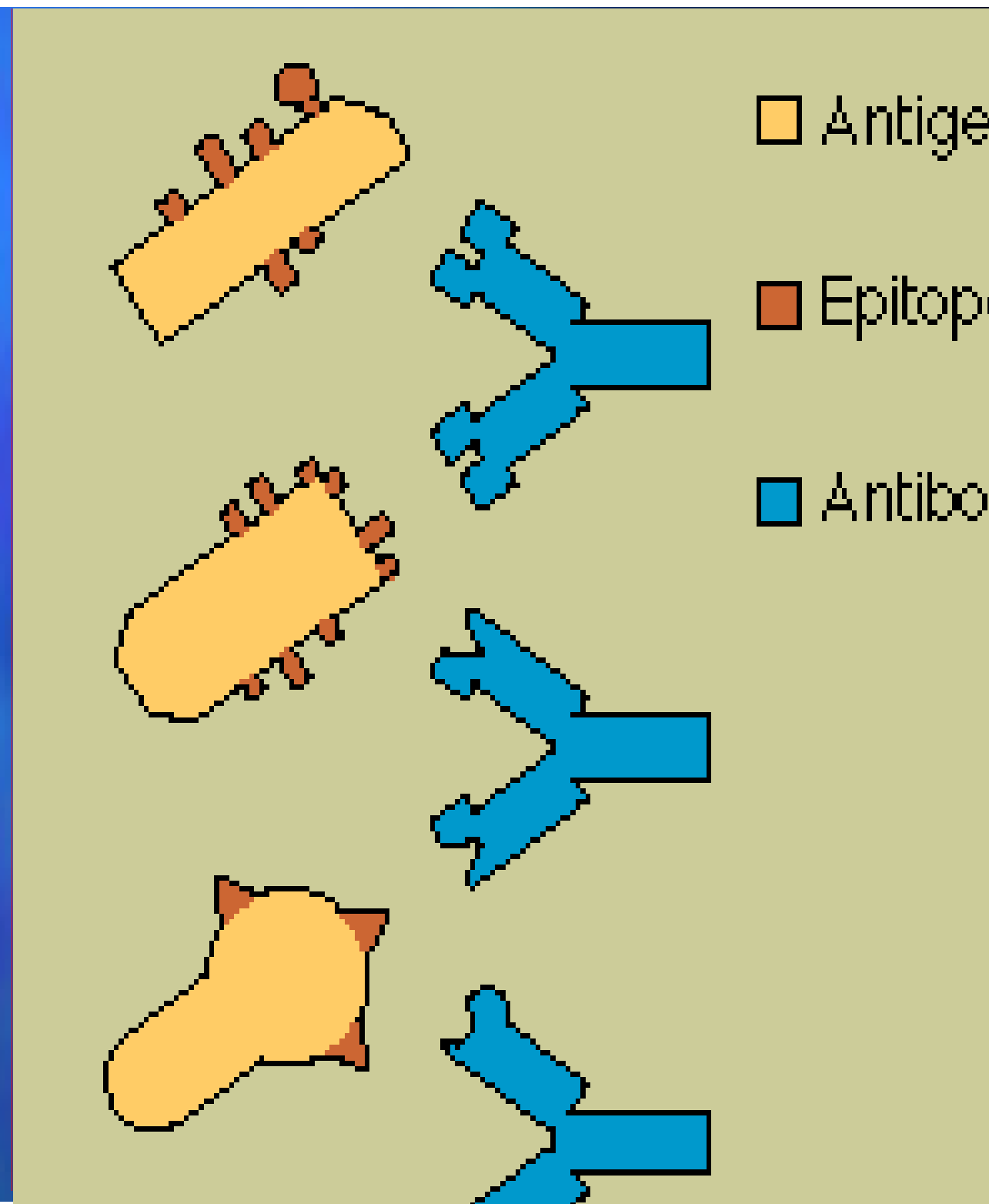


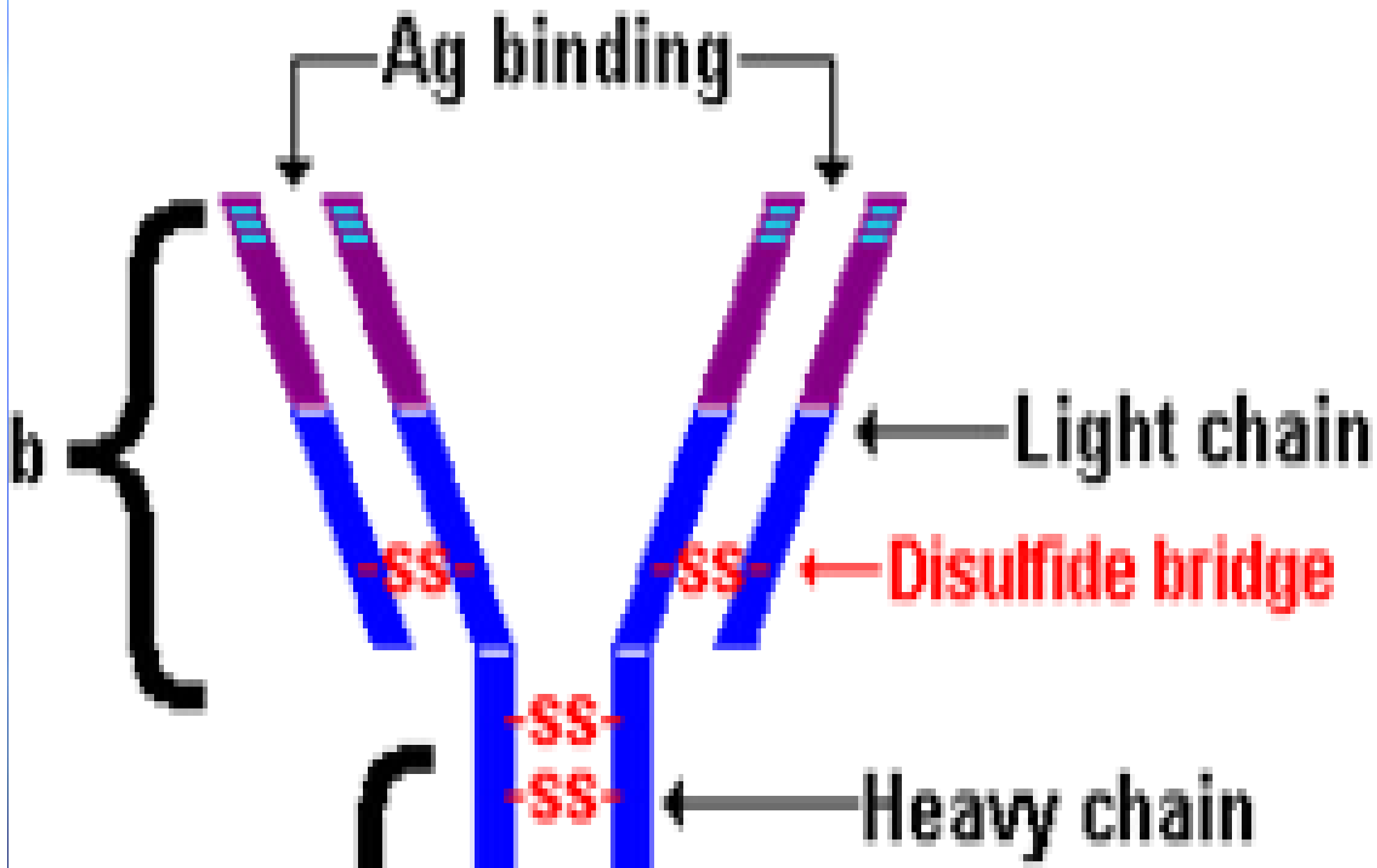


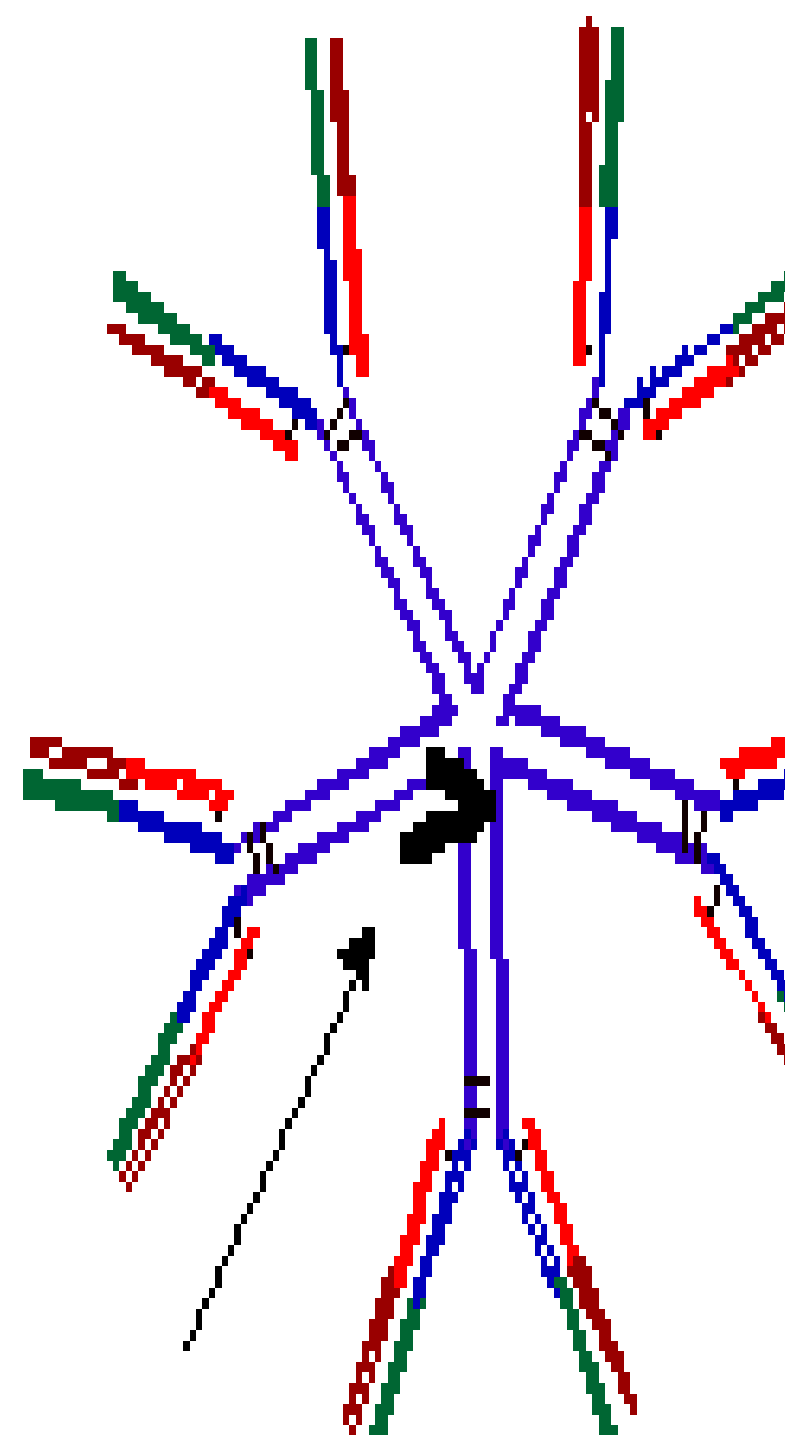
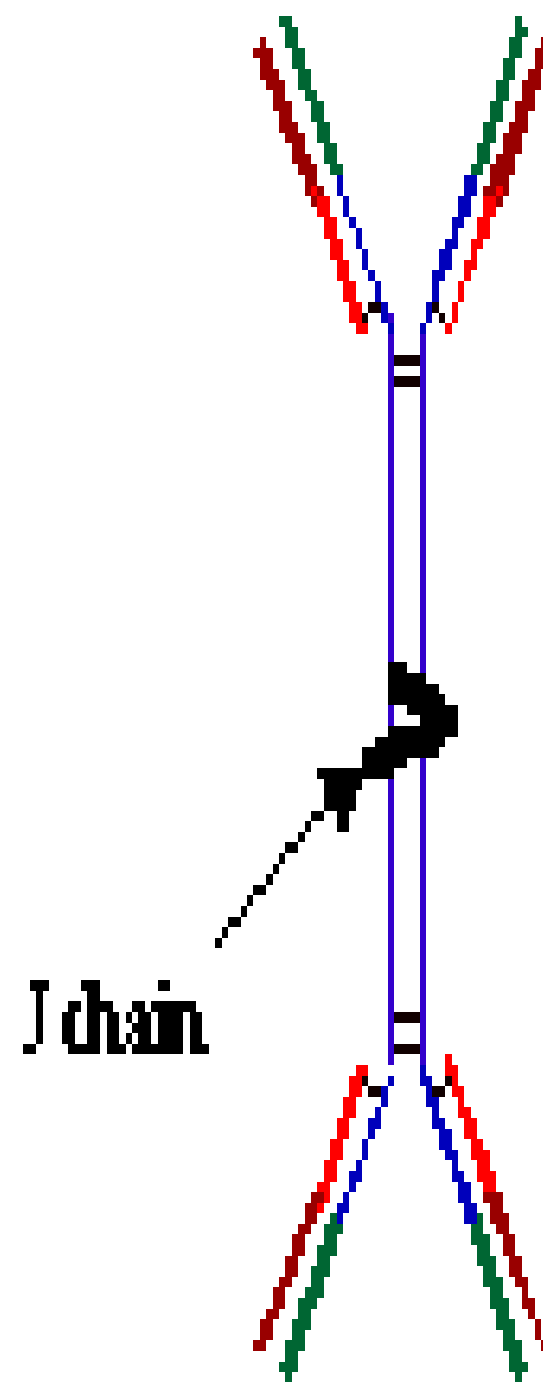
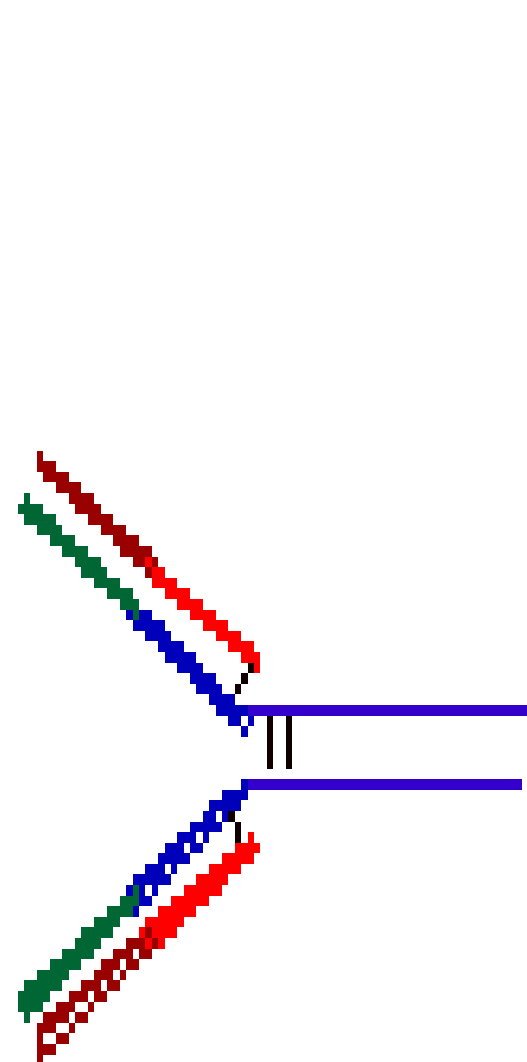


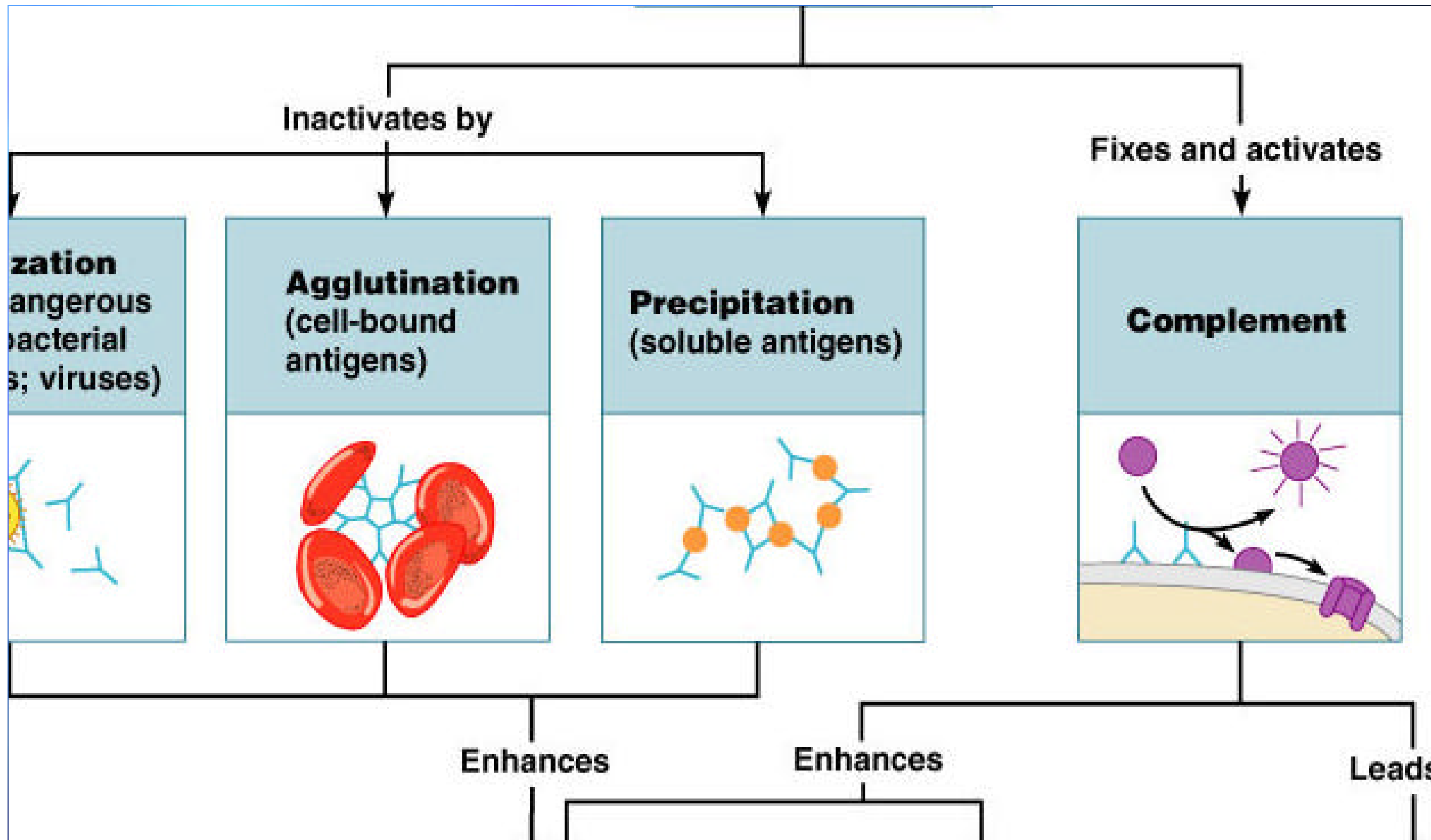
Variable
Regions

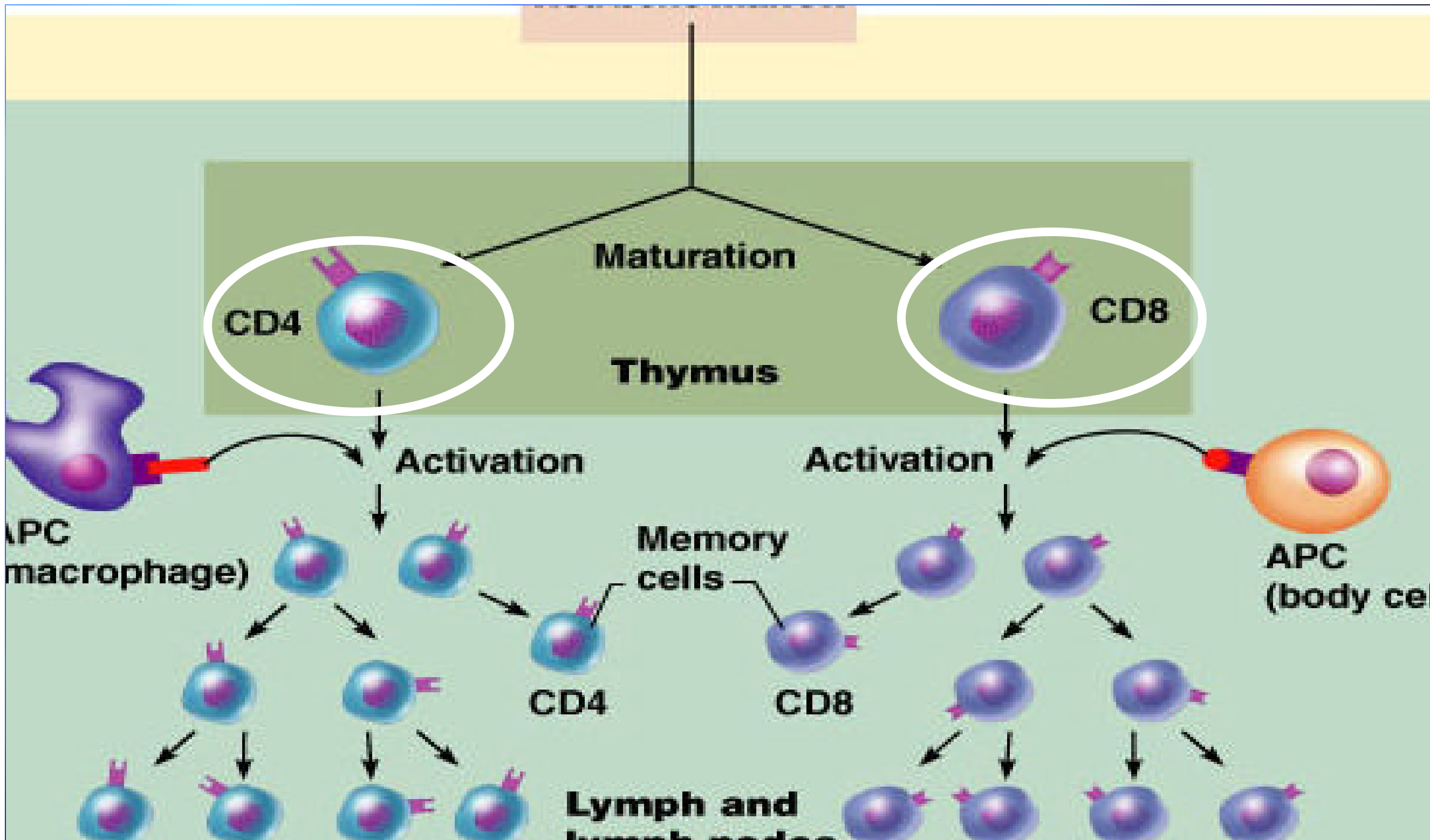
Constant
Regions

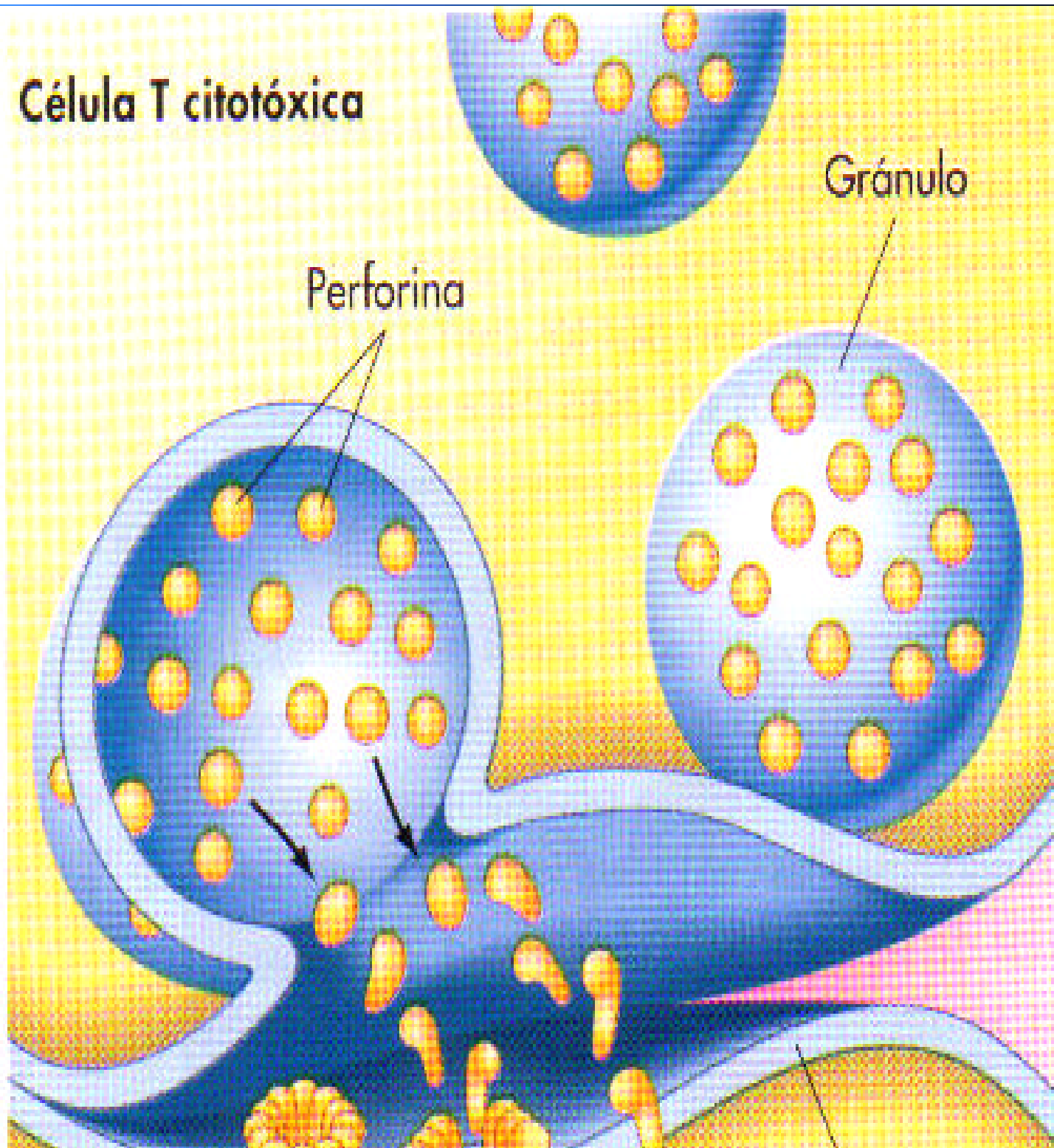
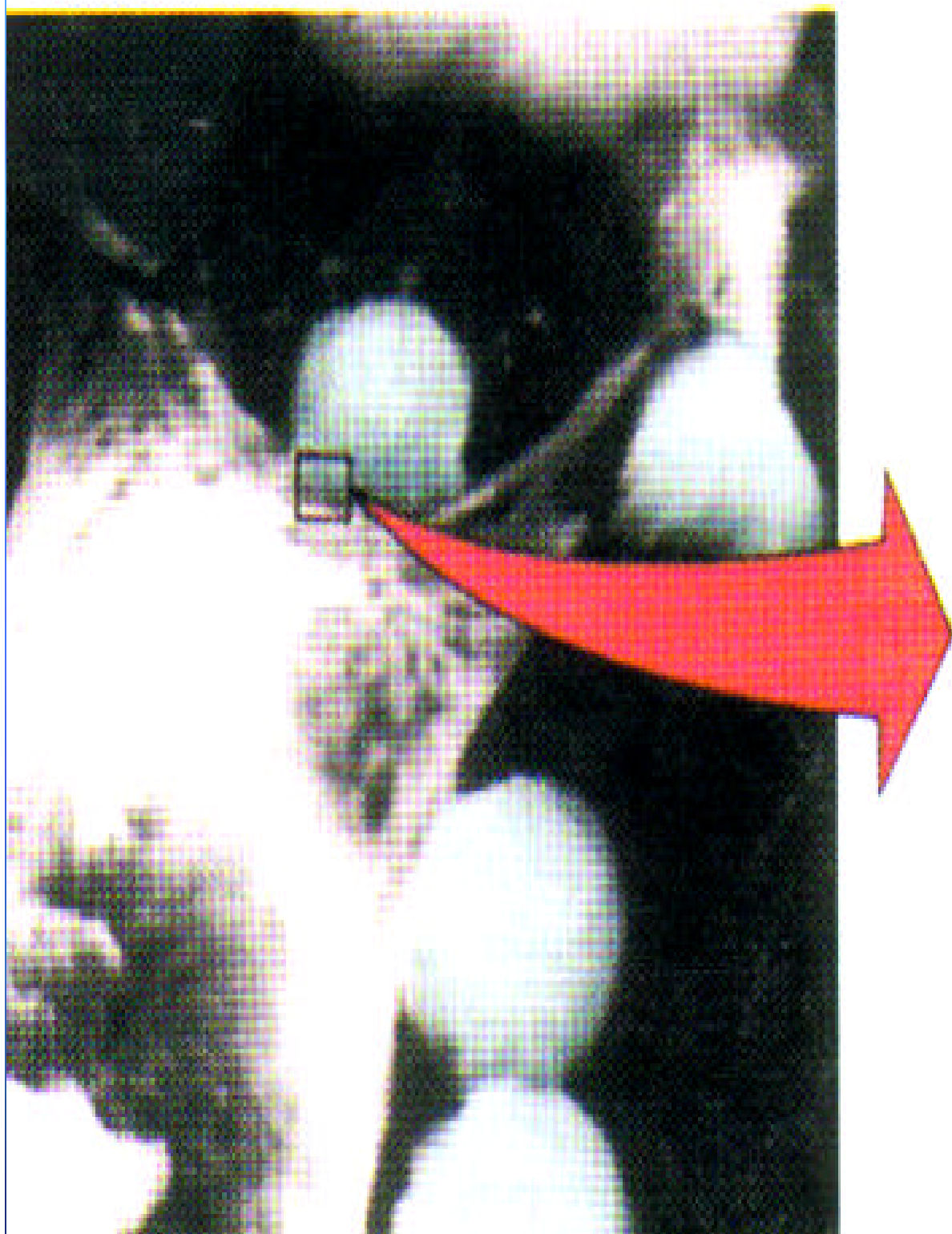


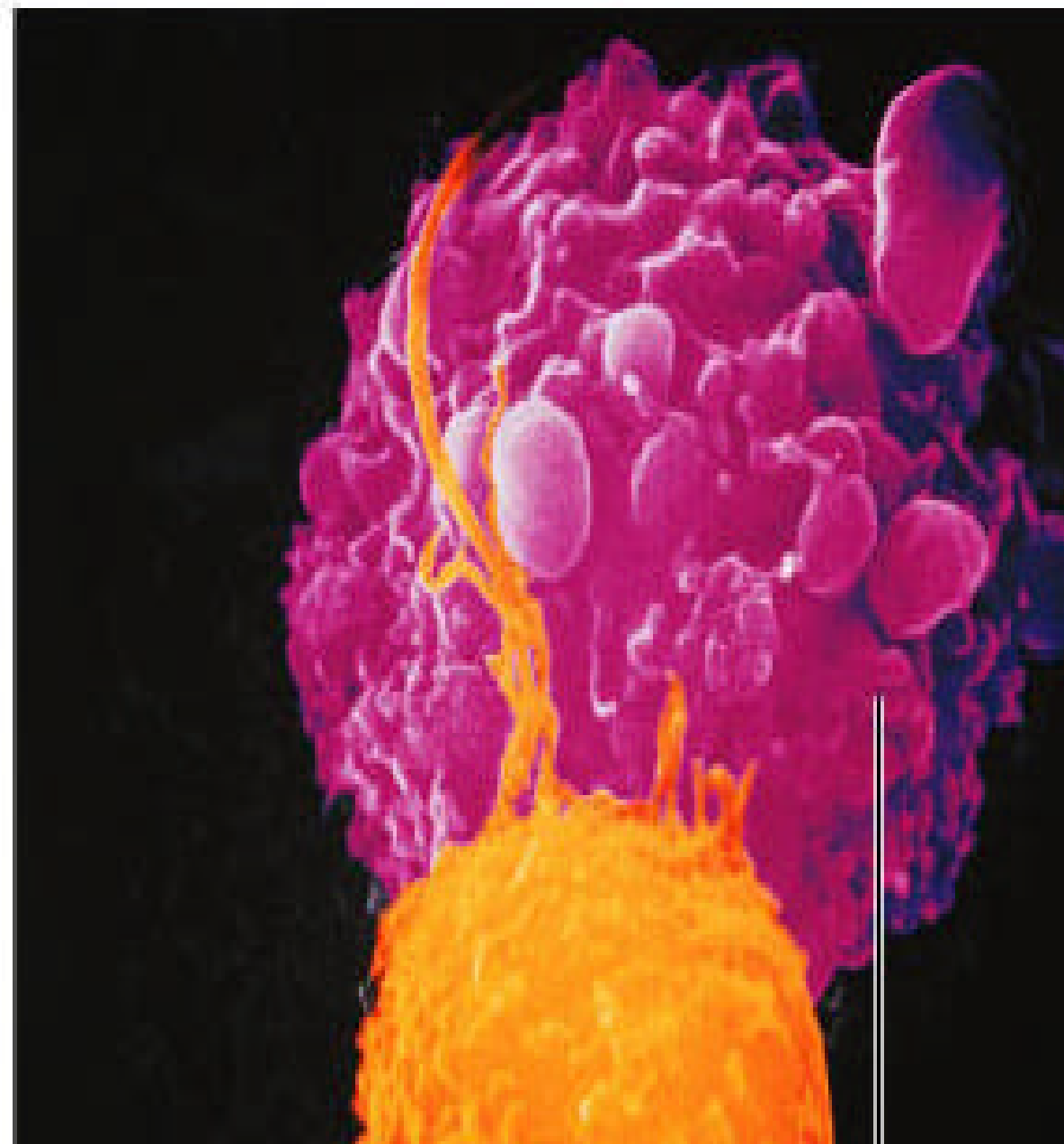
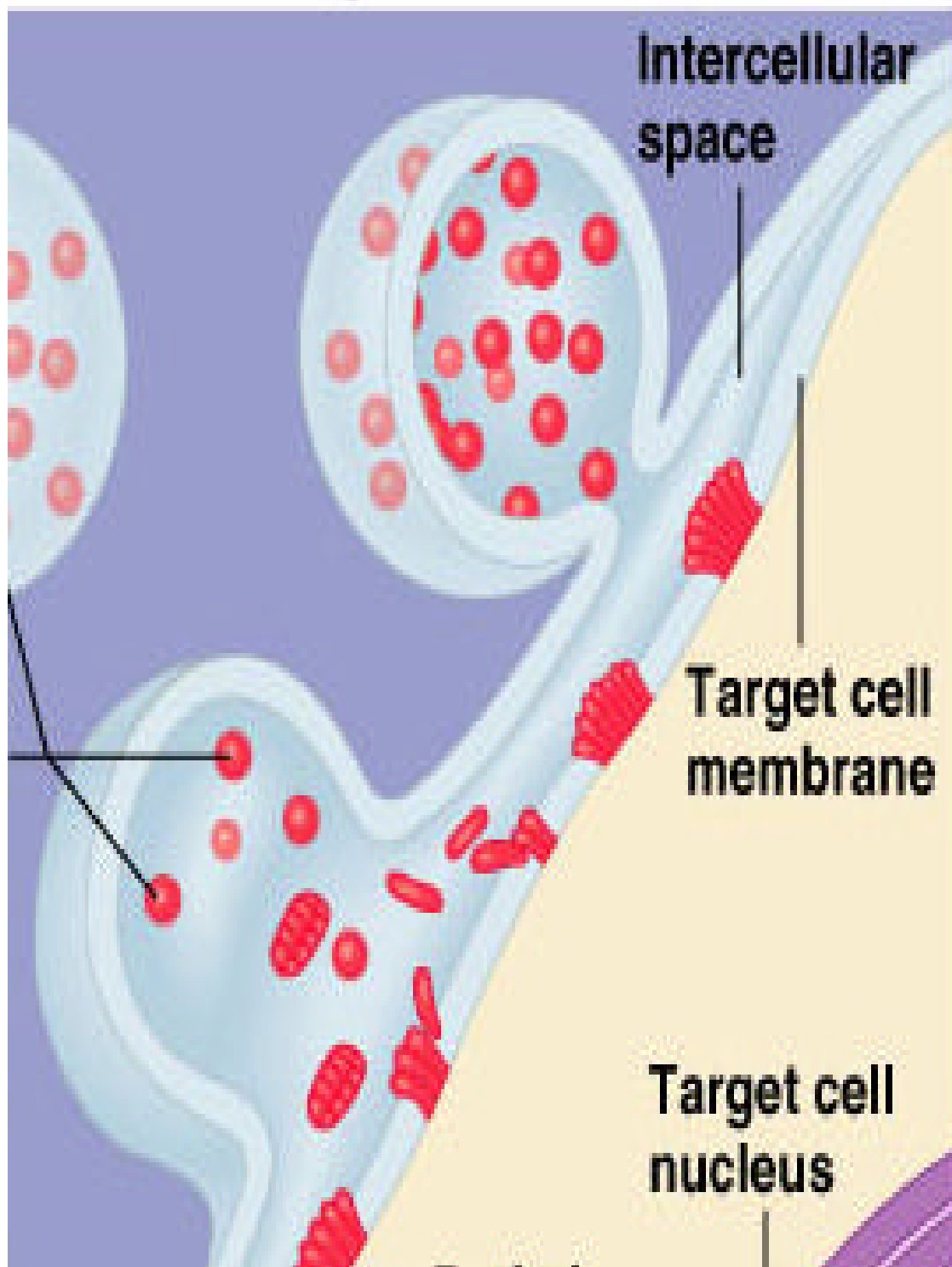


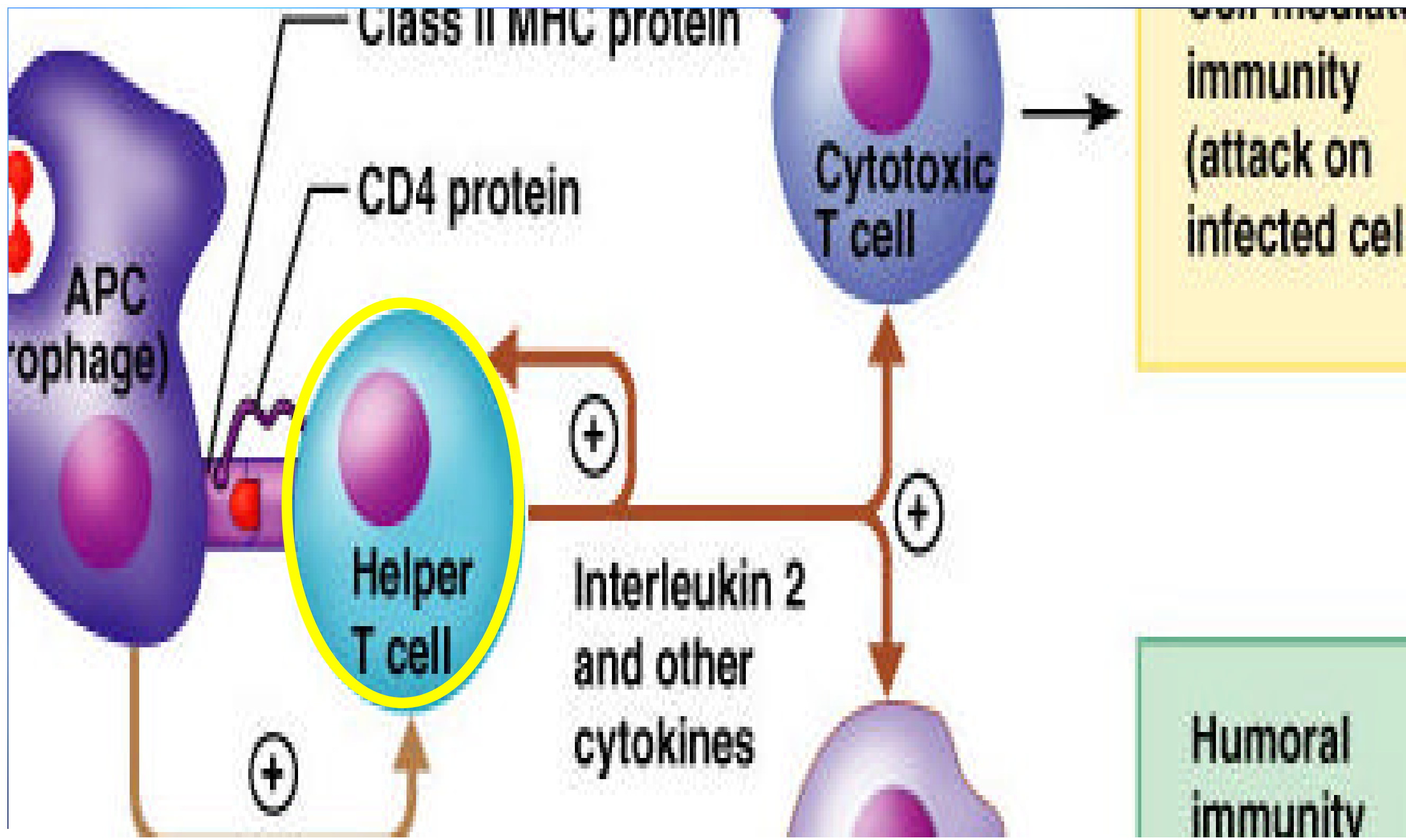












Receptor

para el Antígeno

B

Célula B + antígeno

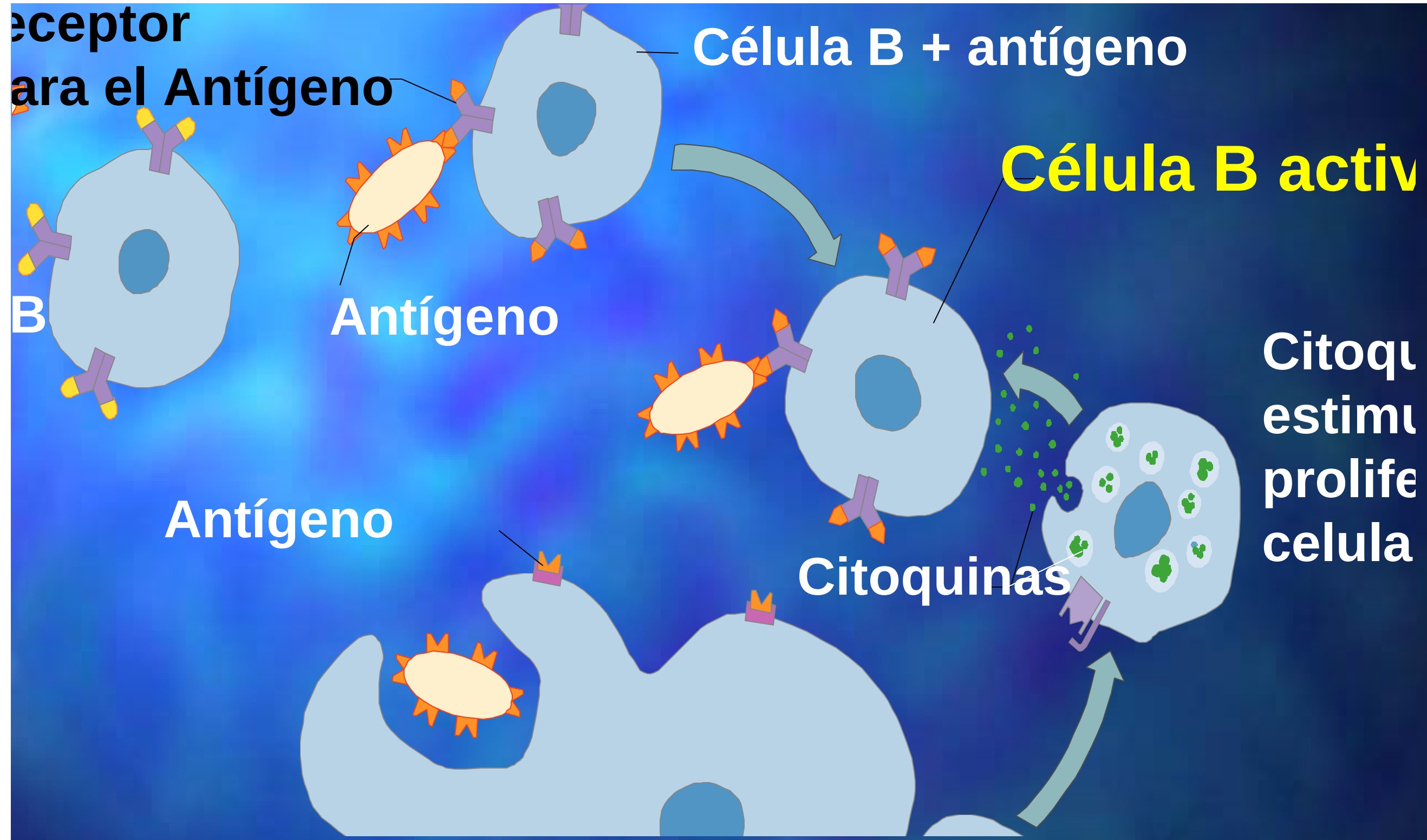
Célula B activa

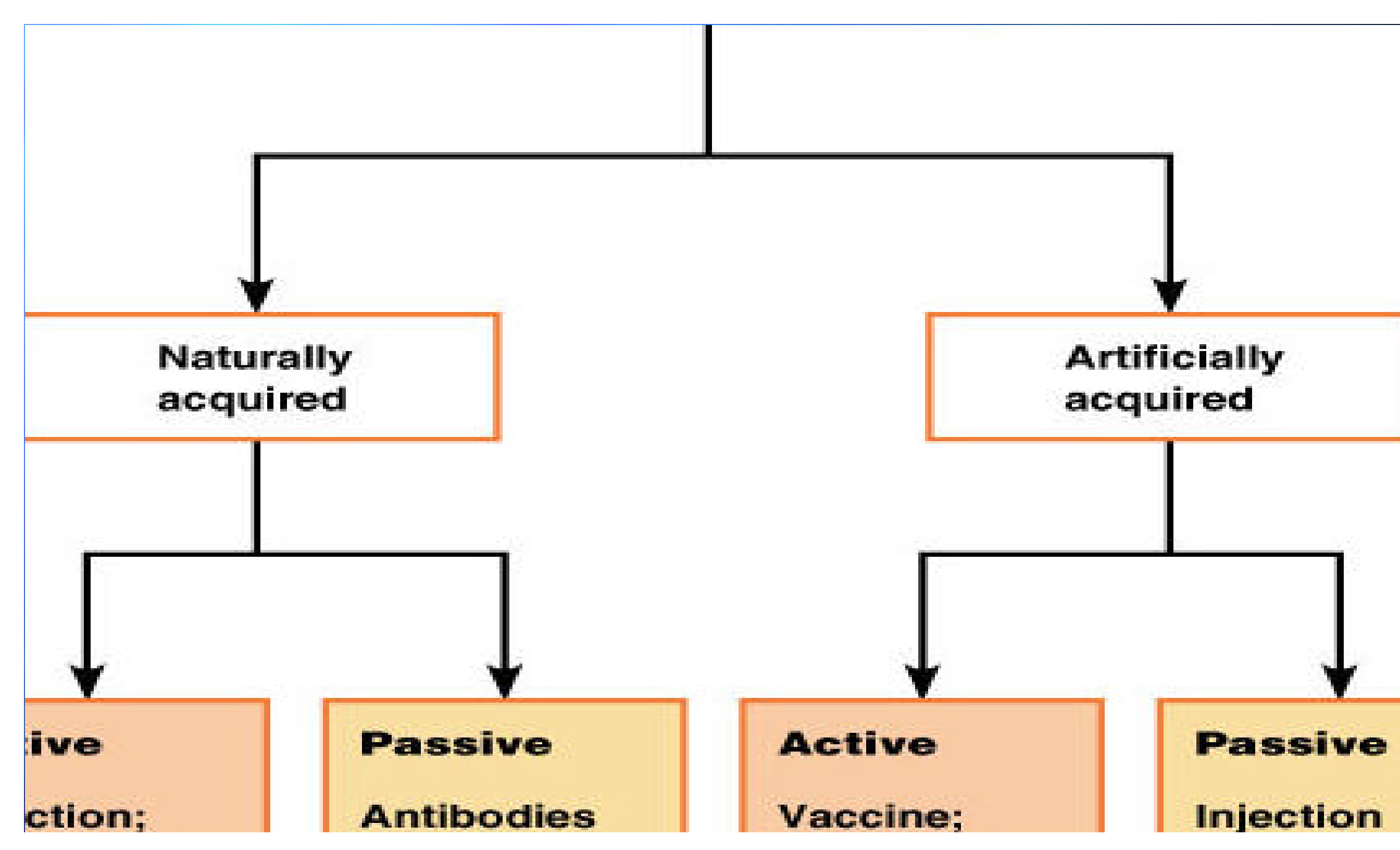
Antígeno

Antígeno

Citoquinas

Citoquinas estimulan la proliferación celular





```
graph TD; Root[ ] --> NA[Naturally acquired]; Root --> AA[Artificially acquired]; NA --> NA1[Active Immunity;]; NA --> NA2[Passive Antibodies]; AA --> AA1[Active Vaccine;]; AA --> AA2[Passive Injection];
```

**Naturally
acquired**

**Artificially
acquired**

**Active
Immunity;**

**Passive
Antibodies**

**Active
Vaccine;**

**Passive
Injection**

