

**Disciplina: IMT2003 - Imunologia e Biologia
Molecular Aplicadas à Saúde Pública
*AULA 2: BASES DA RESPOSTA IMUNE***

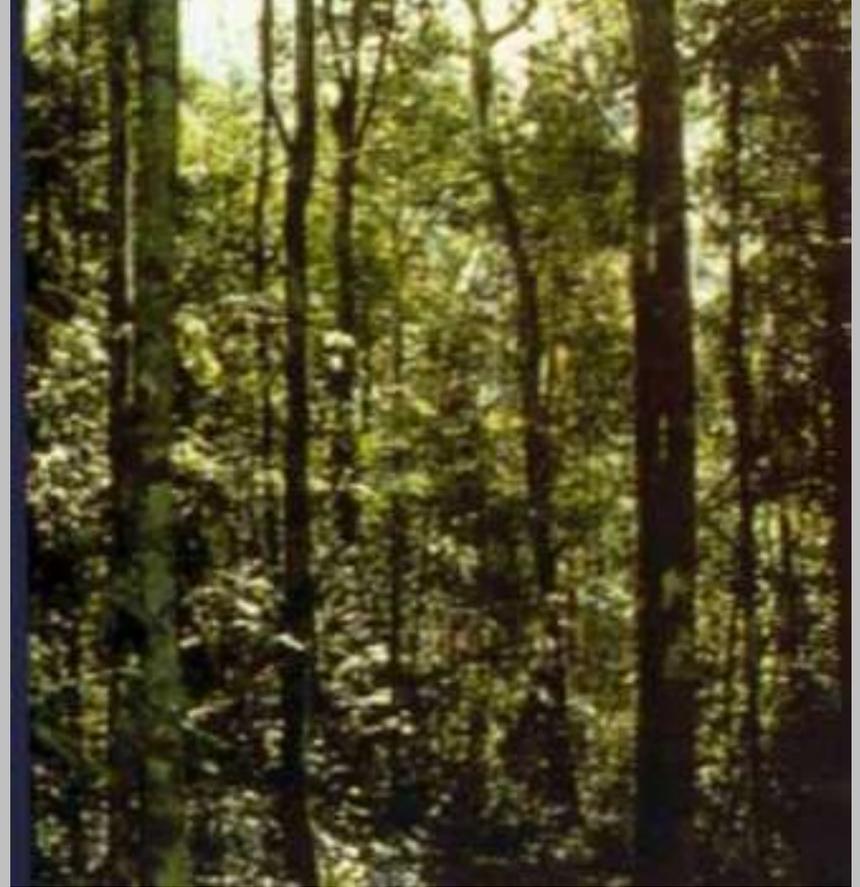


JORGE CASSEB
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FACULDADE DE MEDICINA DA USP

FUNÇÕES BÁSICAS DA RESPOSTA IMUNE

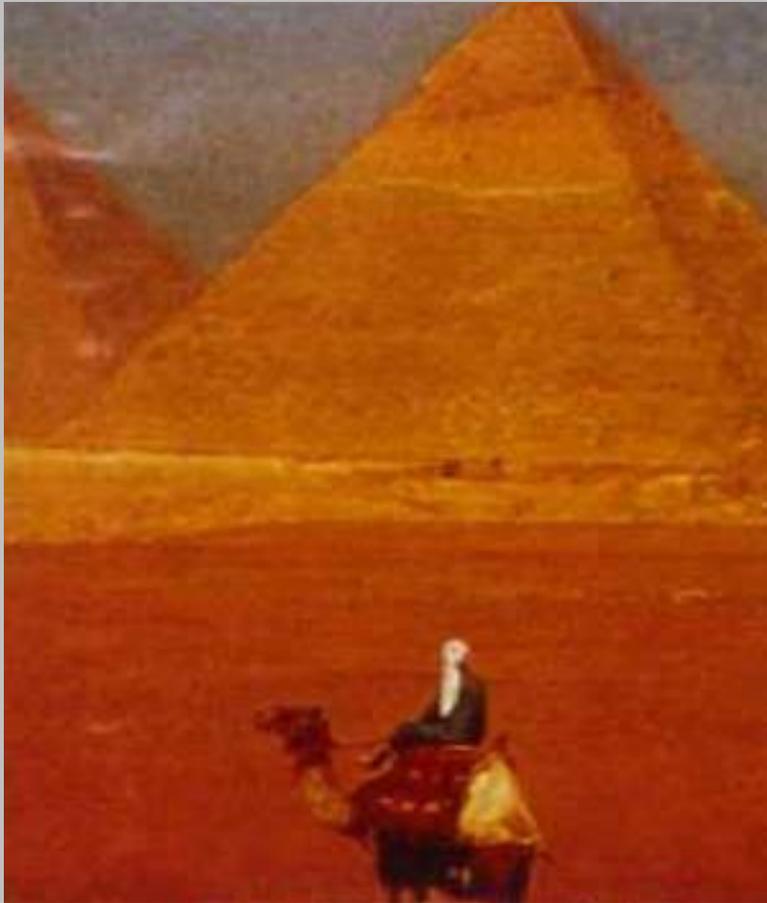


DESTRUIR



RECONSTRUIR

FUNÇÕES BÁSICAS DA RESPOSTA IMUNE



MODULAR

PROTEGER

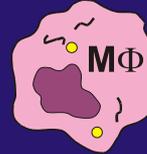
CÉLULAS QUE PARTICIPAM DA RESPOSTA IMUNE



LINFÓCITO T
CITOTÓXICO



LINFÓCITO T
AUXILIAR



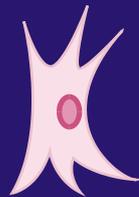
MACRÓFAGO



CÉLULA
NATURAL KILLER



LINFÓCITO B



CÉLULA
DENDRÍTICA
MIELÓIDE



CÉLULA
DE LANGERHANS



CÉLULA
DENDRÍTICA
PLASMOCITÓIDE



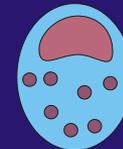
MASTÓCITO



EOSINÓFILO

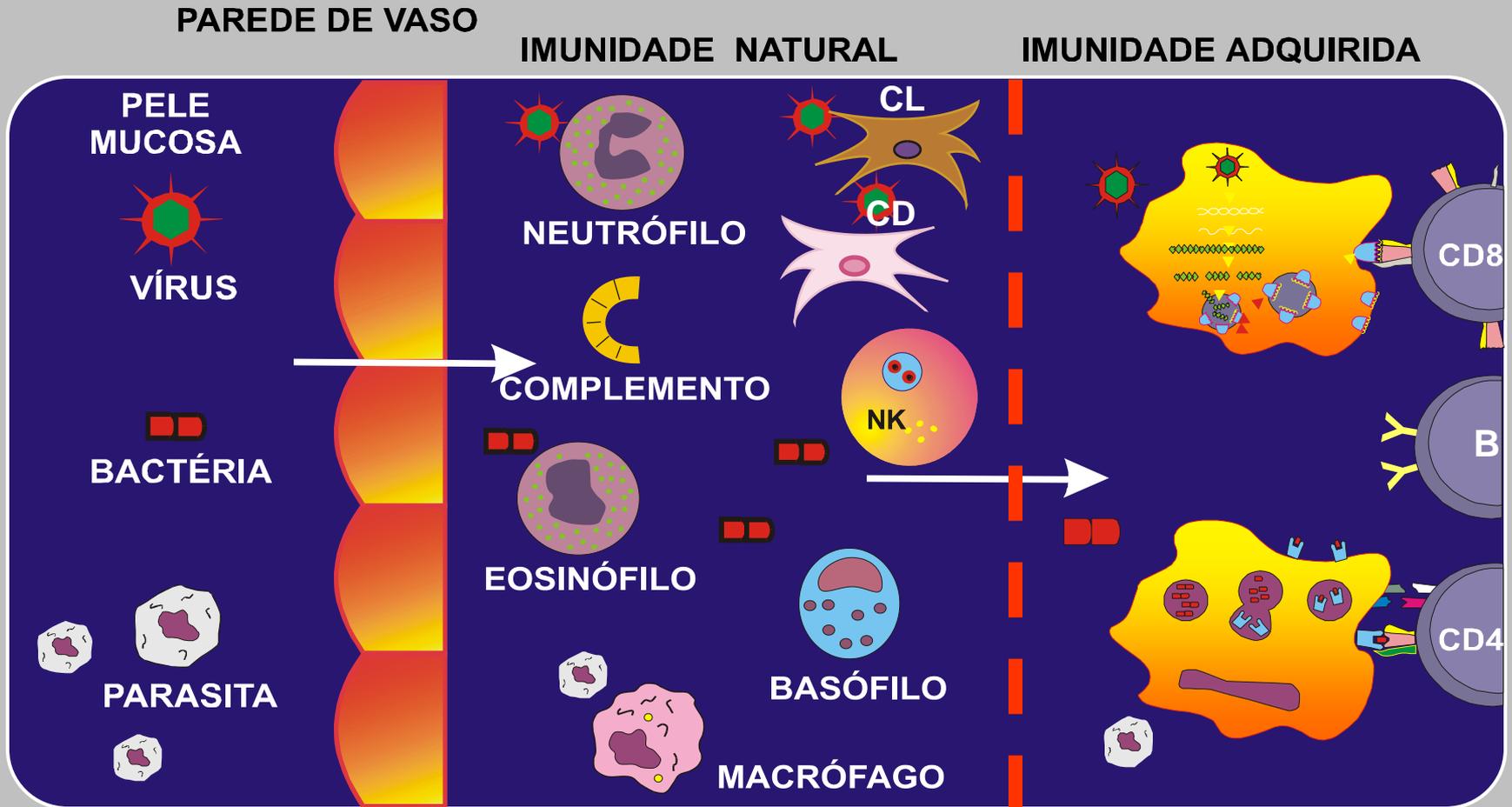


NEUTRÓFILO

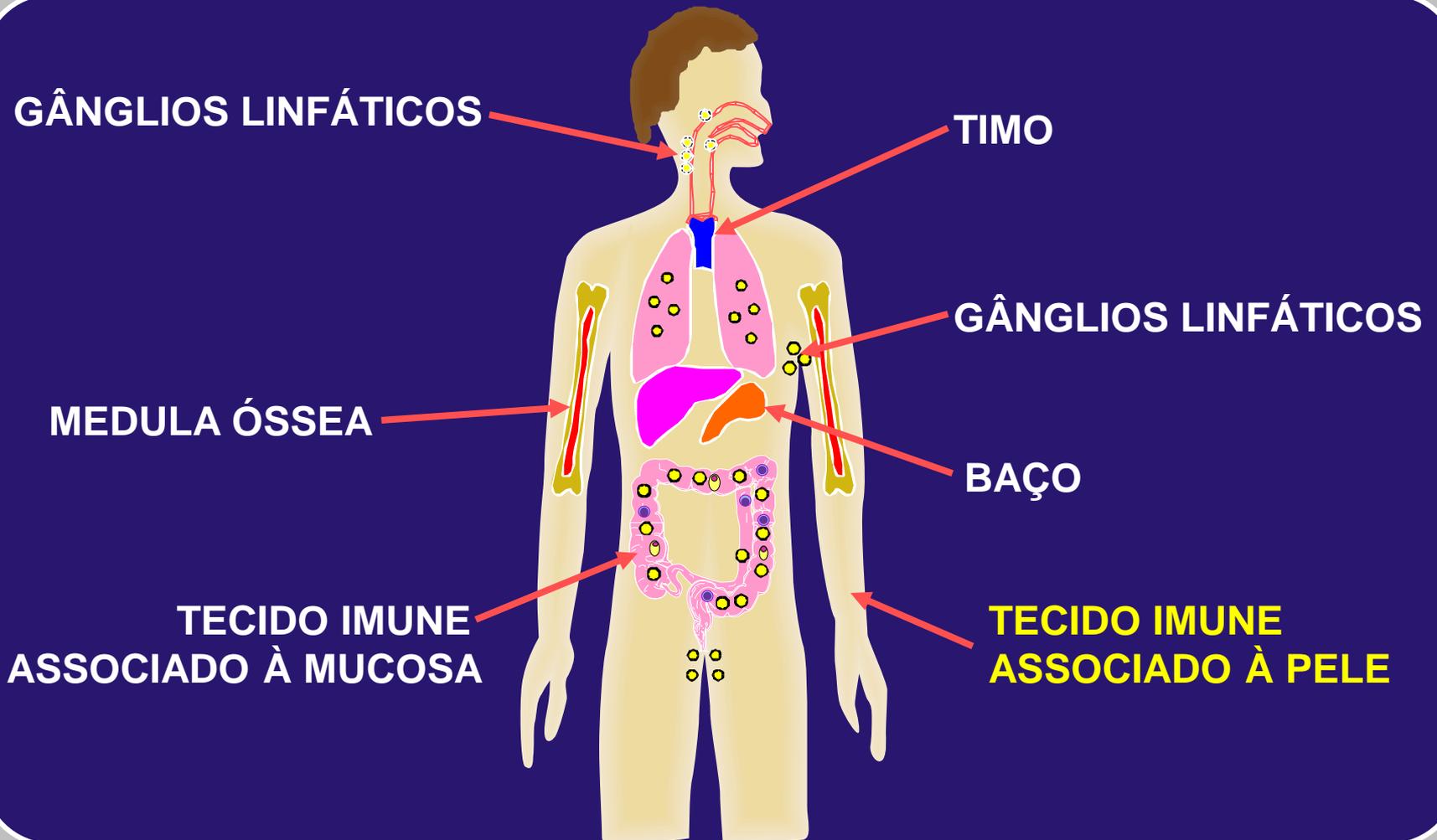


BASÓFILO

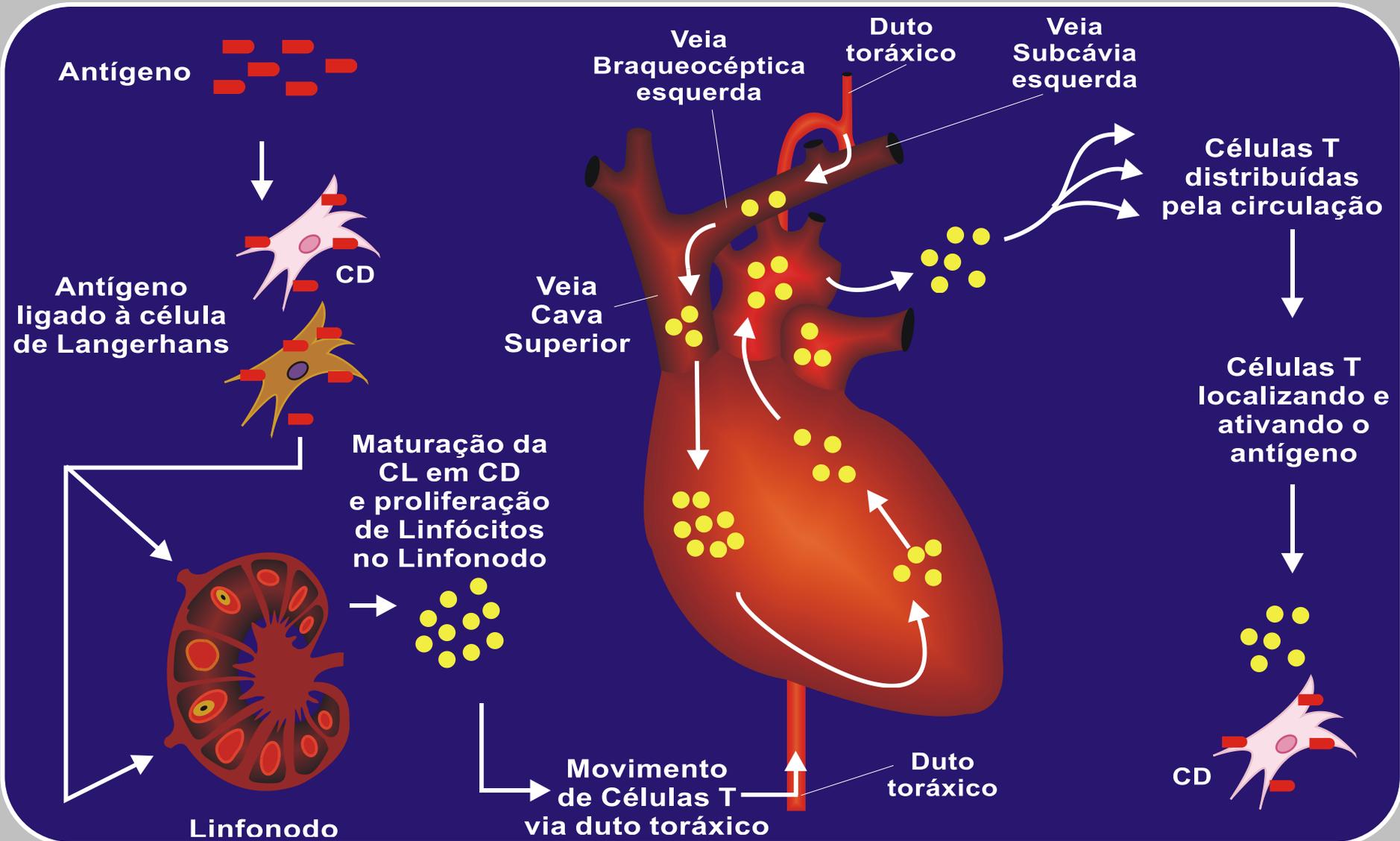
MECANISMOS BÁSICOS DA IMUNIDADE



ÓRGÃOS DA RESPOSTA IMUNE



RECIRCULAÇÃO DE CÉLULAS



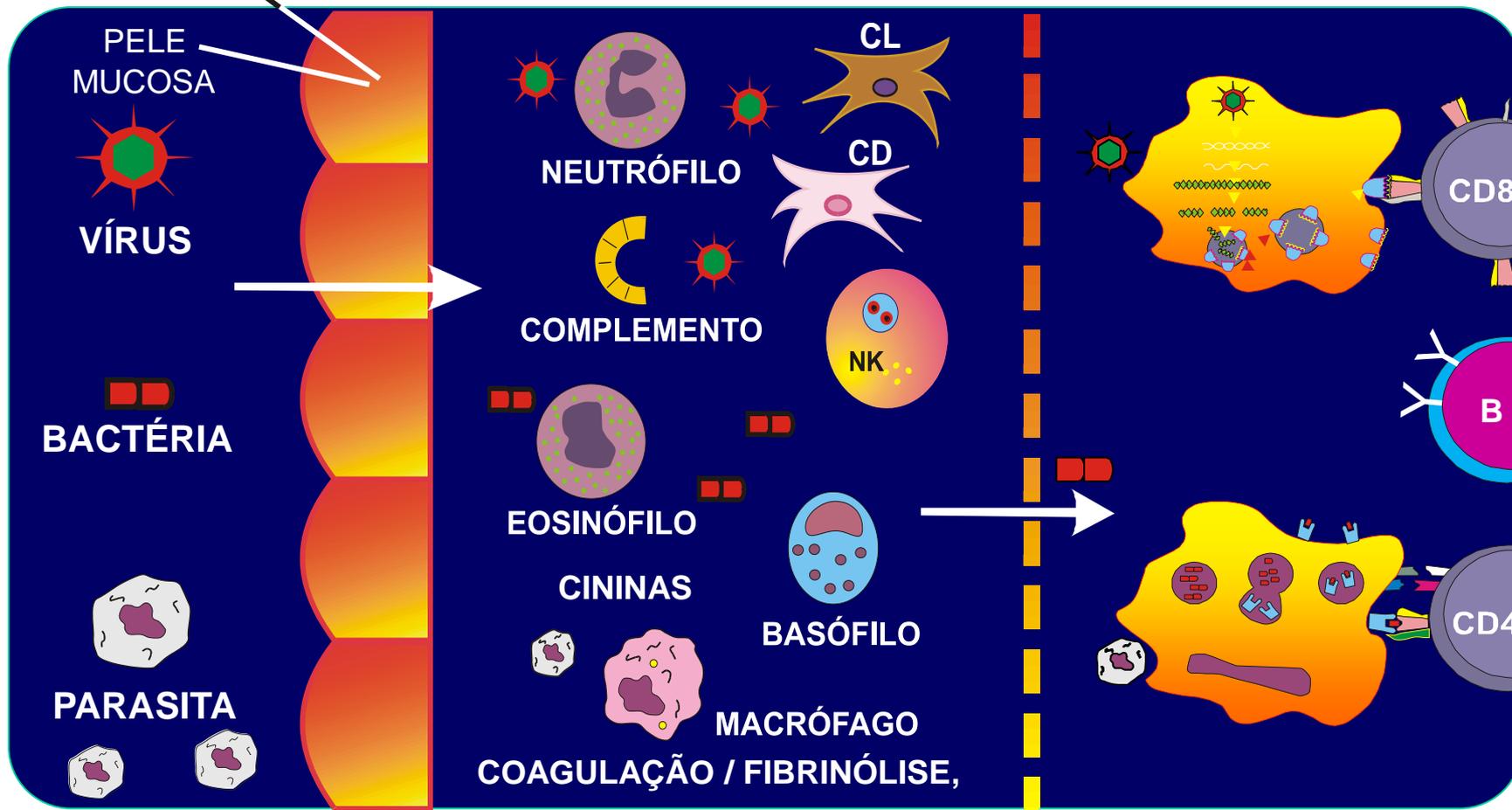


RESPOSTA IMUNE

BARREIRA NATURAL

IMUNIDADE INATA

IMUNIDADE ADAPTATIVA

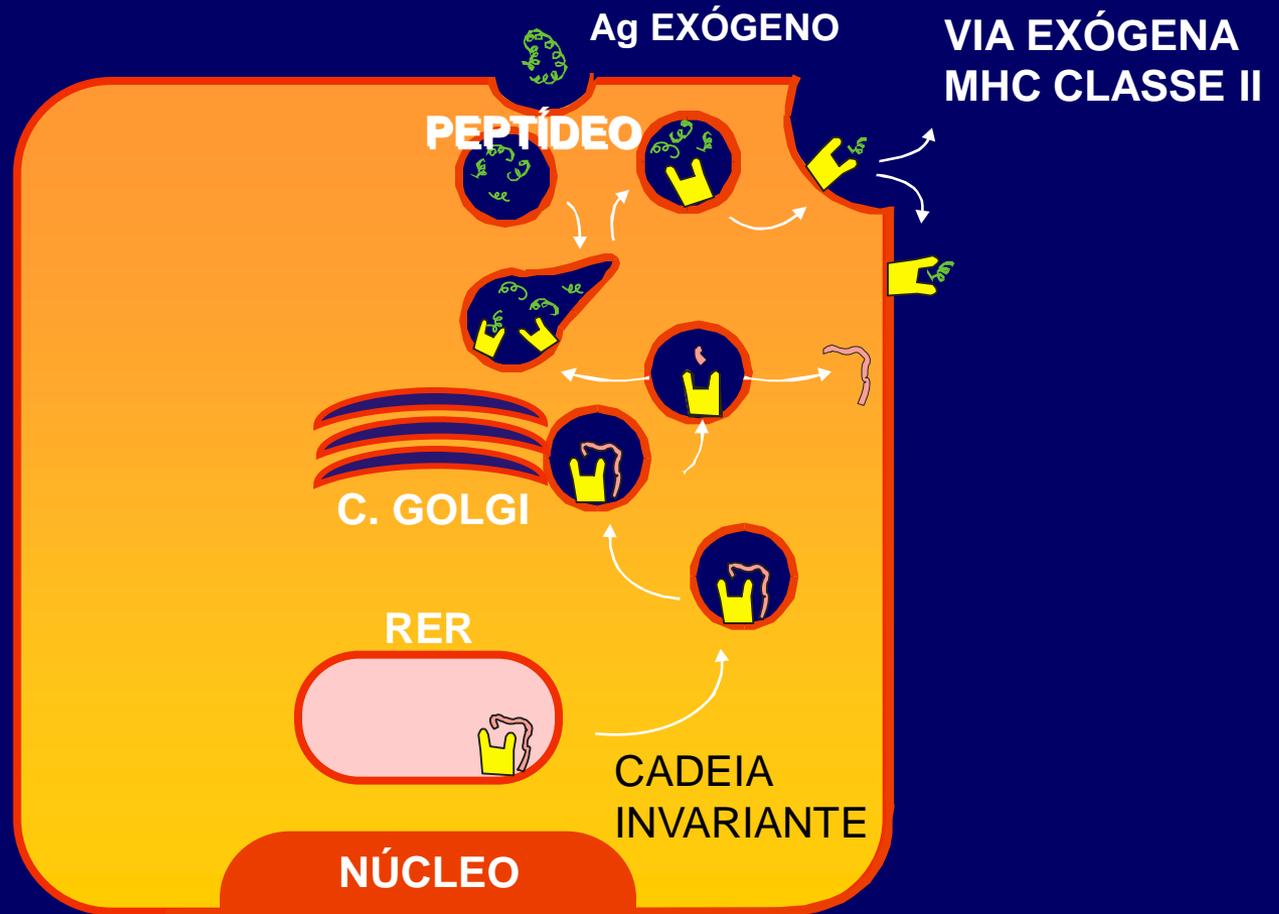


90% de defesa

97% de defesa

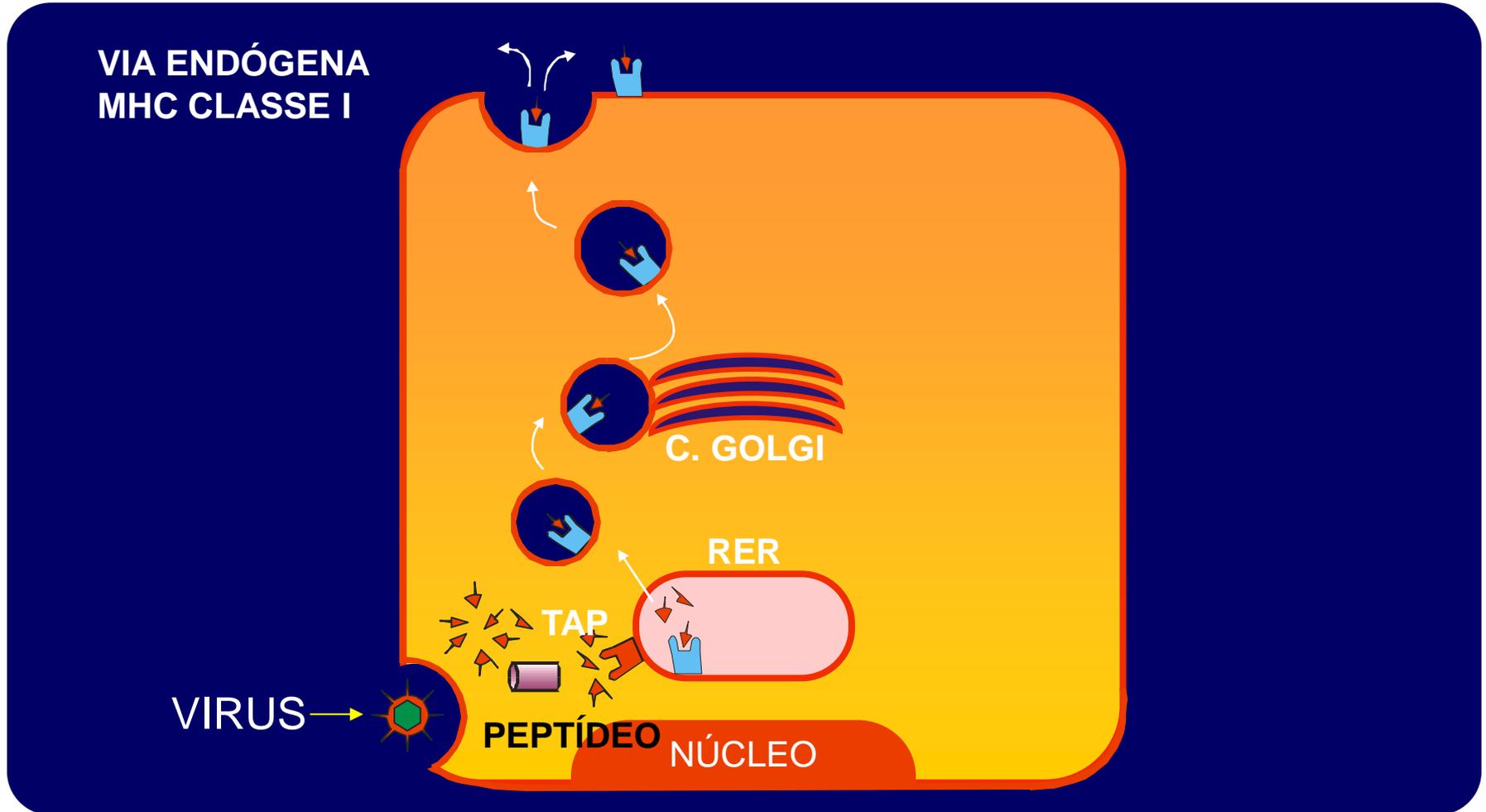
RESPOSTA IMUNE

APRESENTAÇÃO DE ANTÍGENOS EXÓGENOS

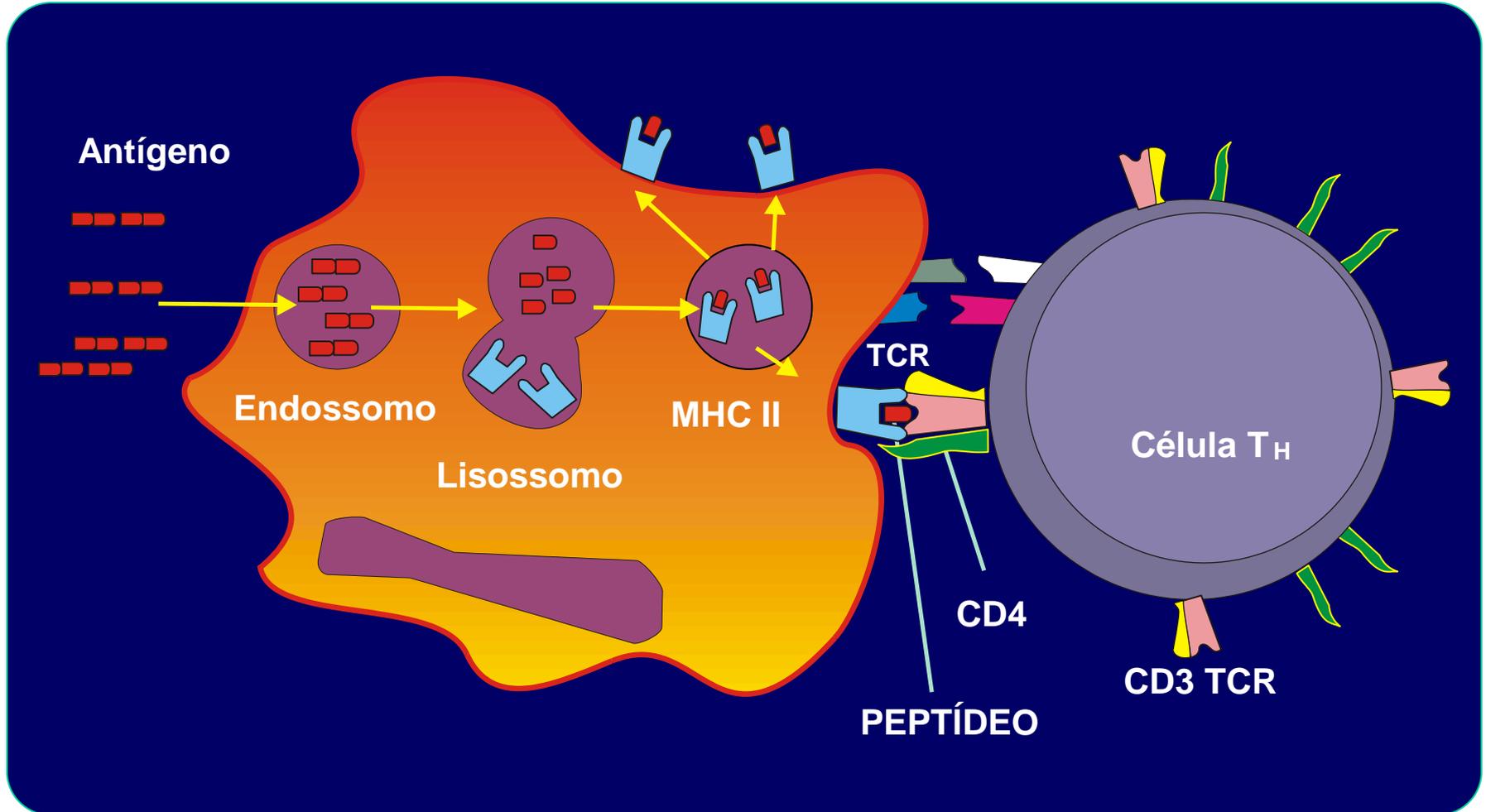


ATIVAÇÃO DA IMUNIDADE ADQUIRIDA

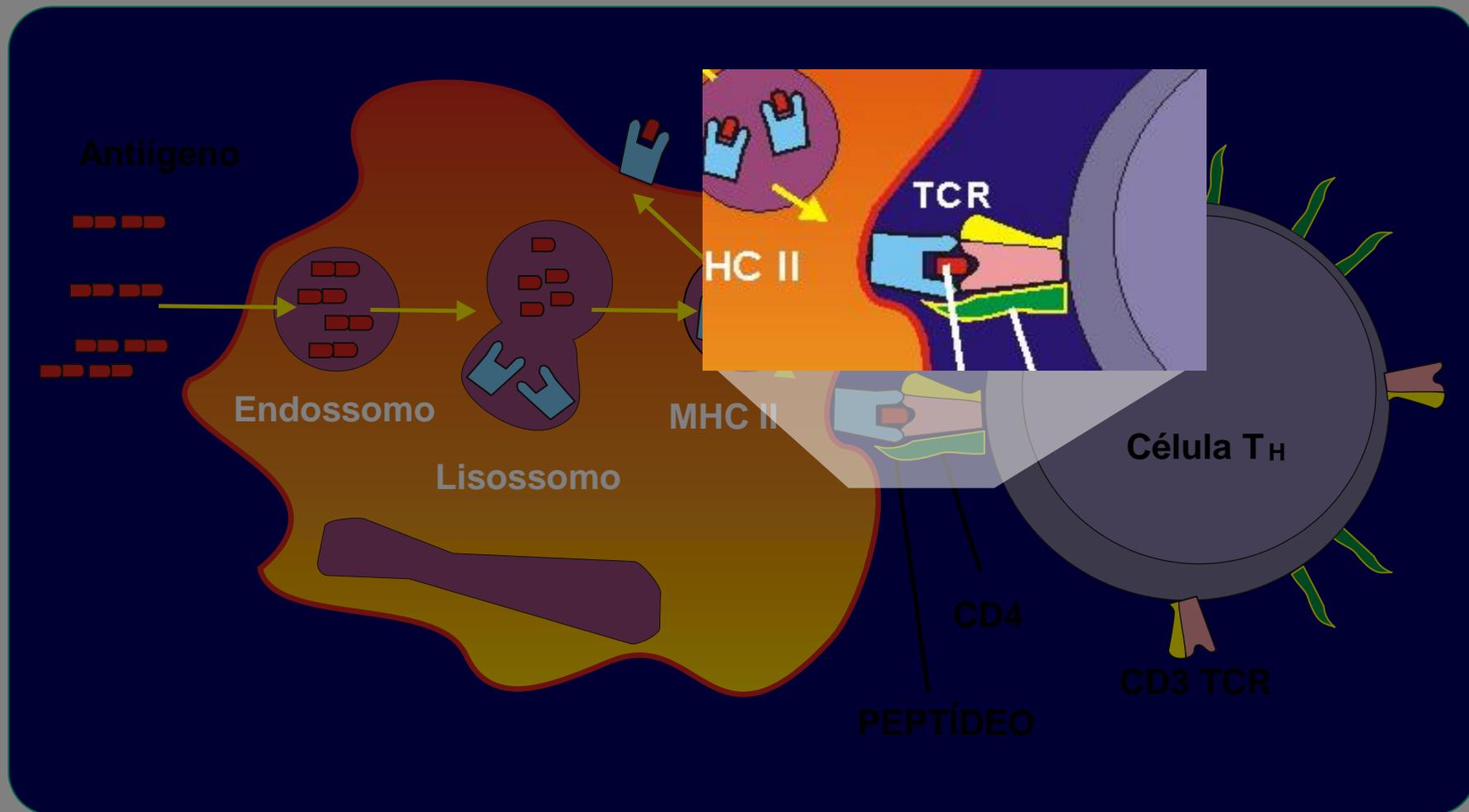
APRESENTAÇÃO DE ANTÍGENOS ENDÓGENOS



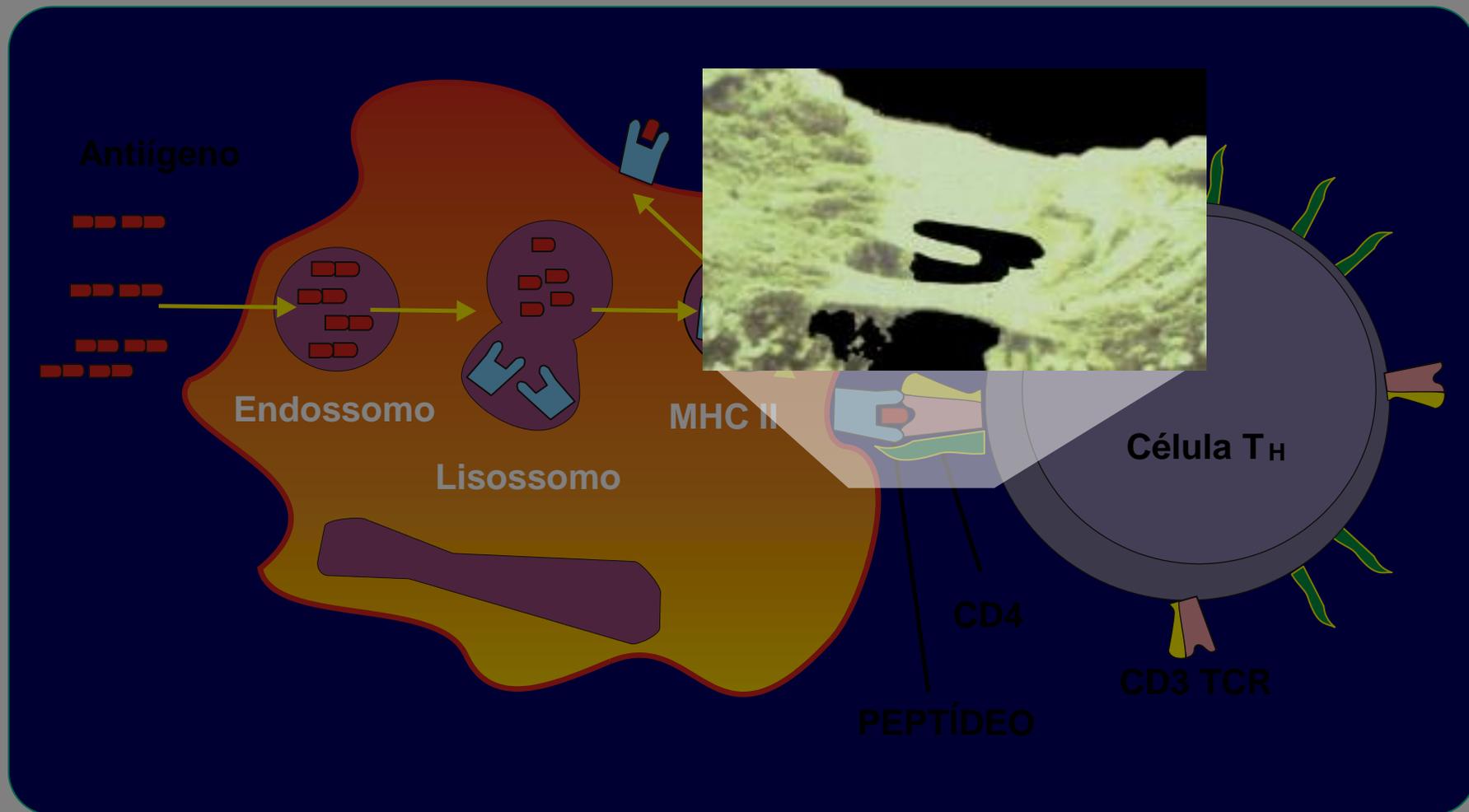
INTERAÇÃO DA CÉLULA APRESENTADORA - LINFÓCITO



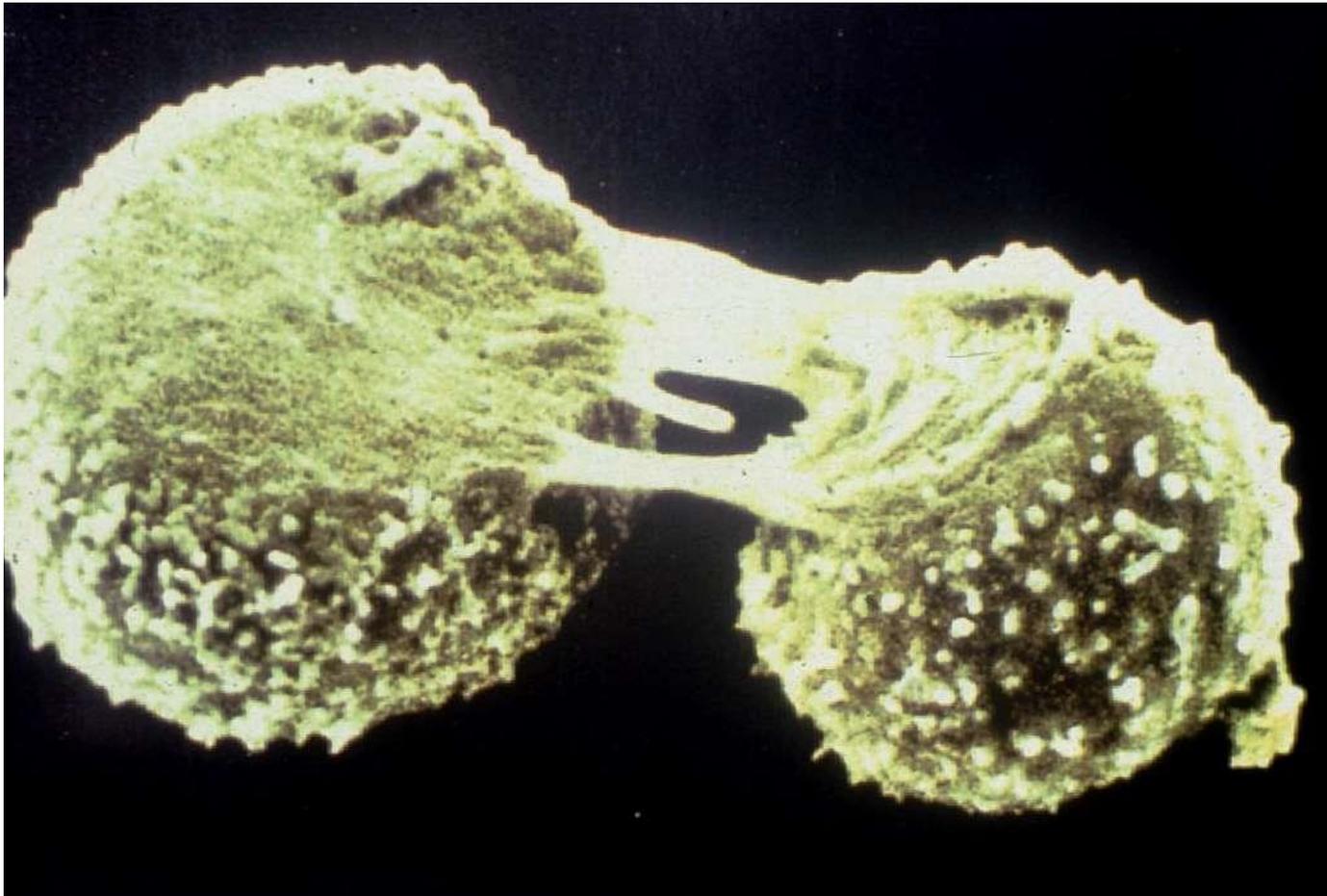
INTERAÇÃO DA CÉLULA APRESENTADORA - LINFÓCITO



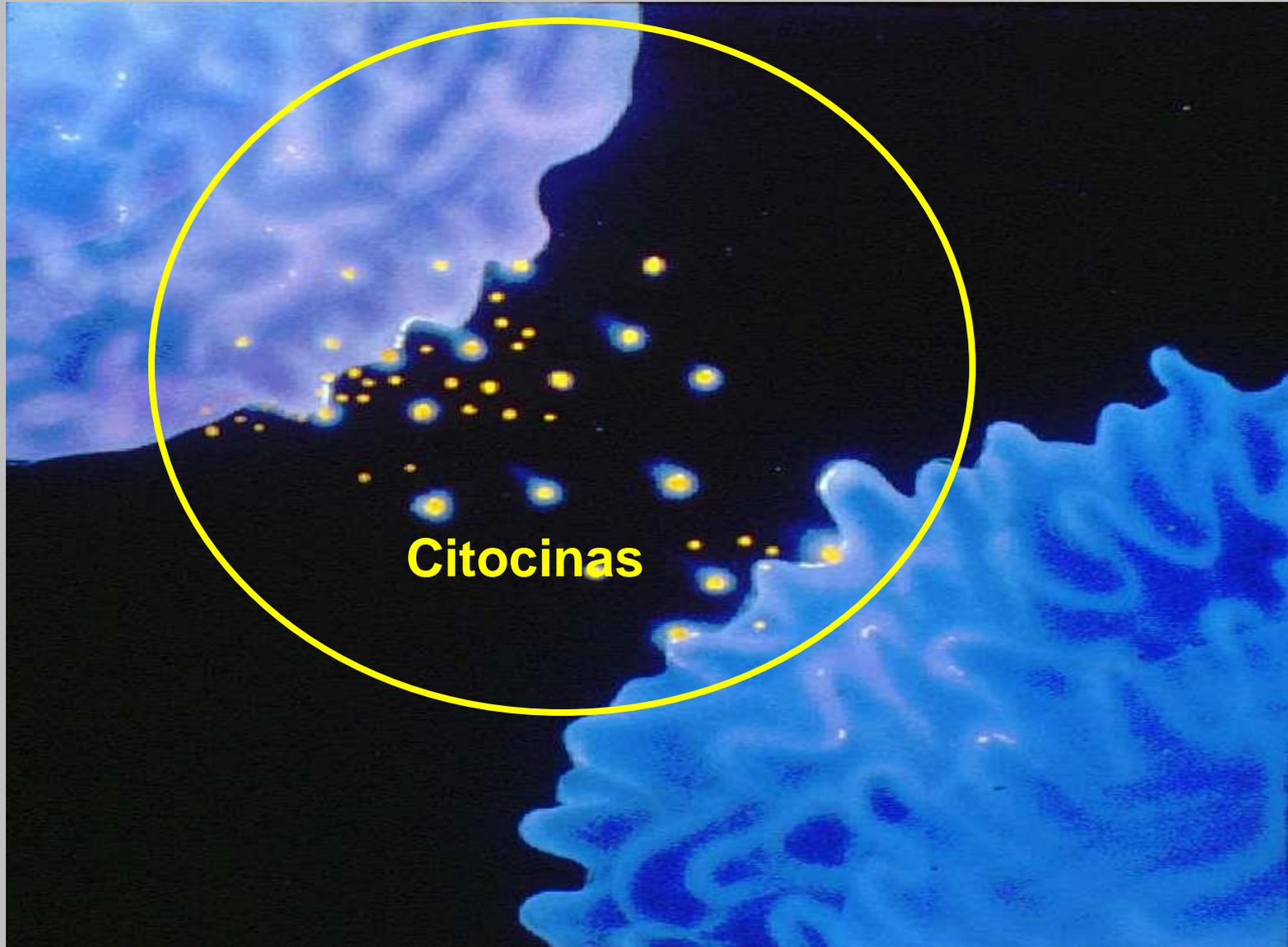
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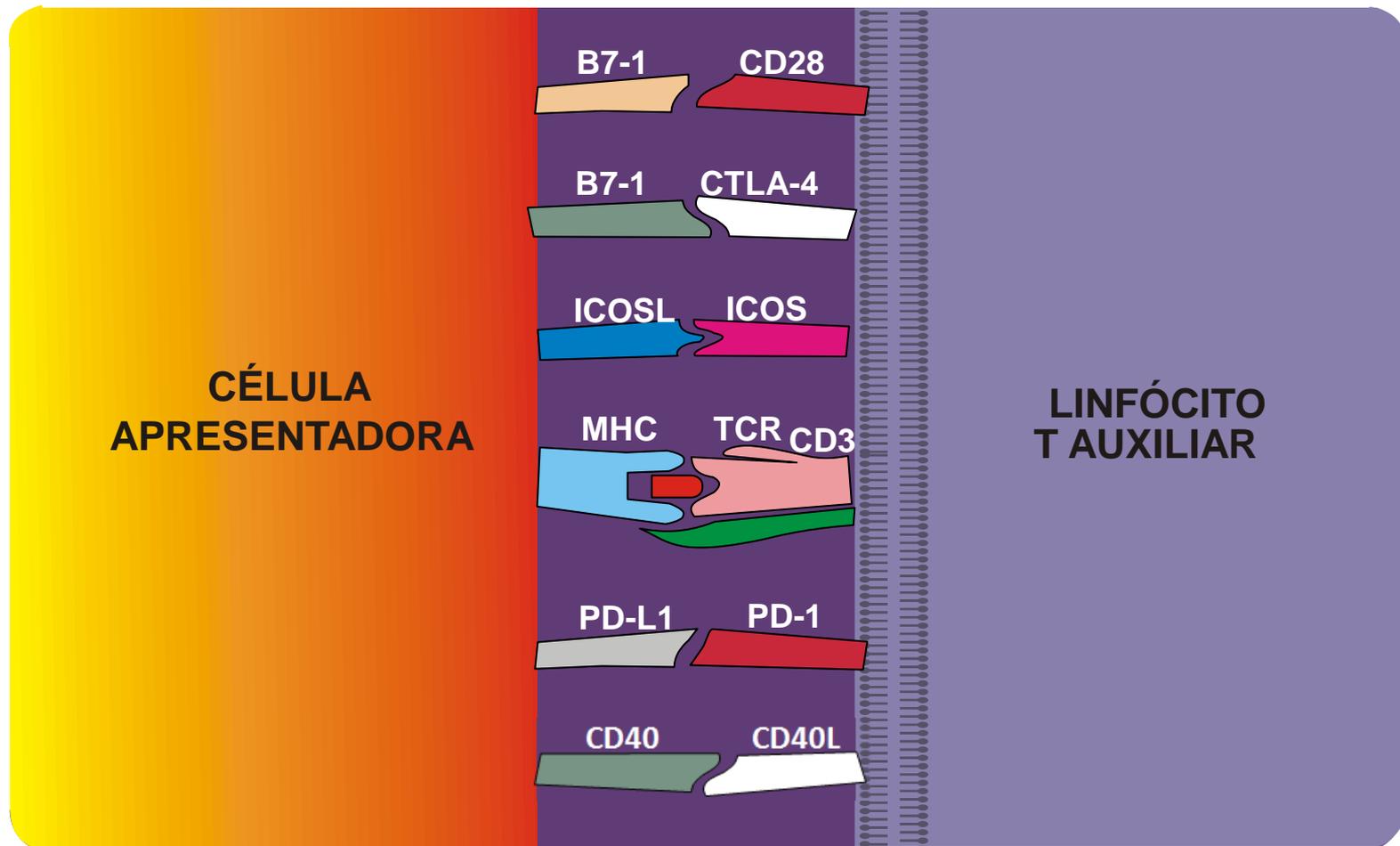
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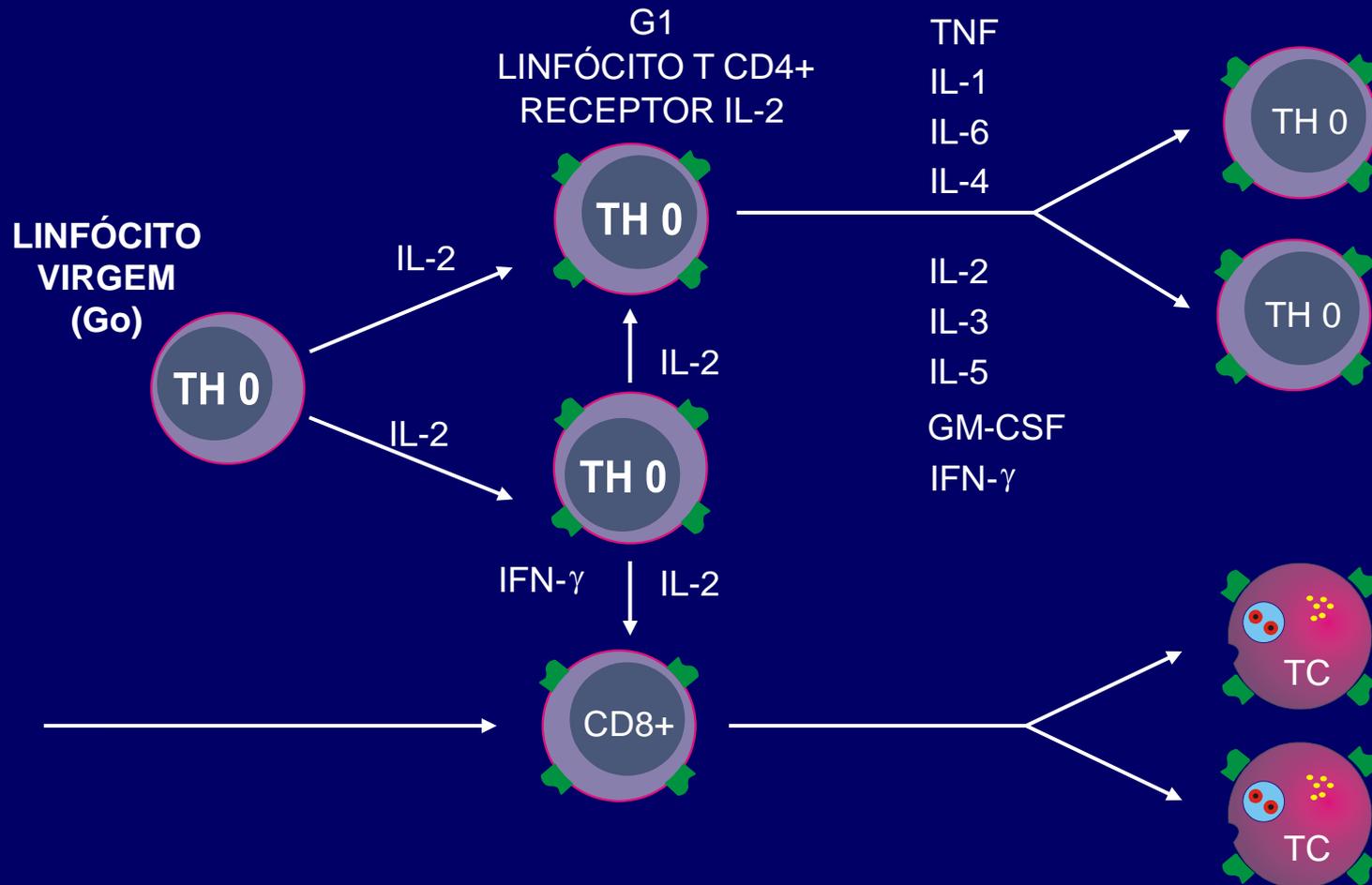
FORMAS DE COMUNICAÇÃO DO SISTEMA IMUNE



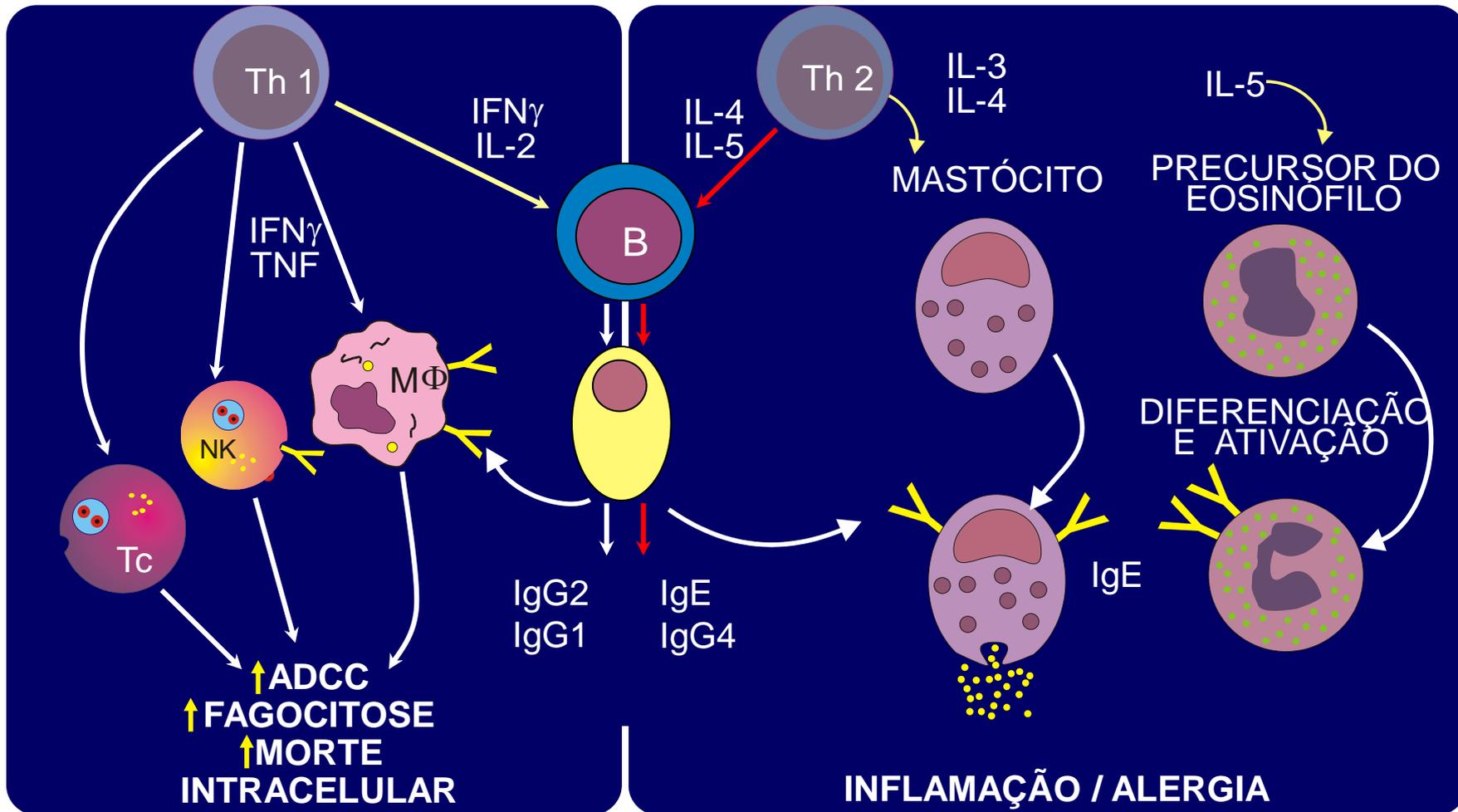
CÉLULA APRESENTADORA – LINFÓCITO T CD4+



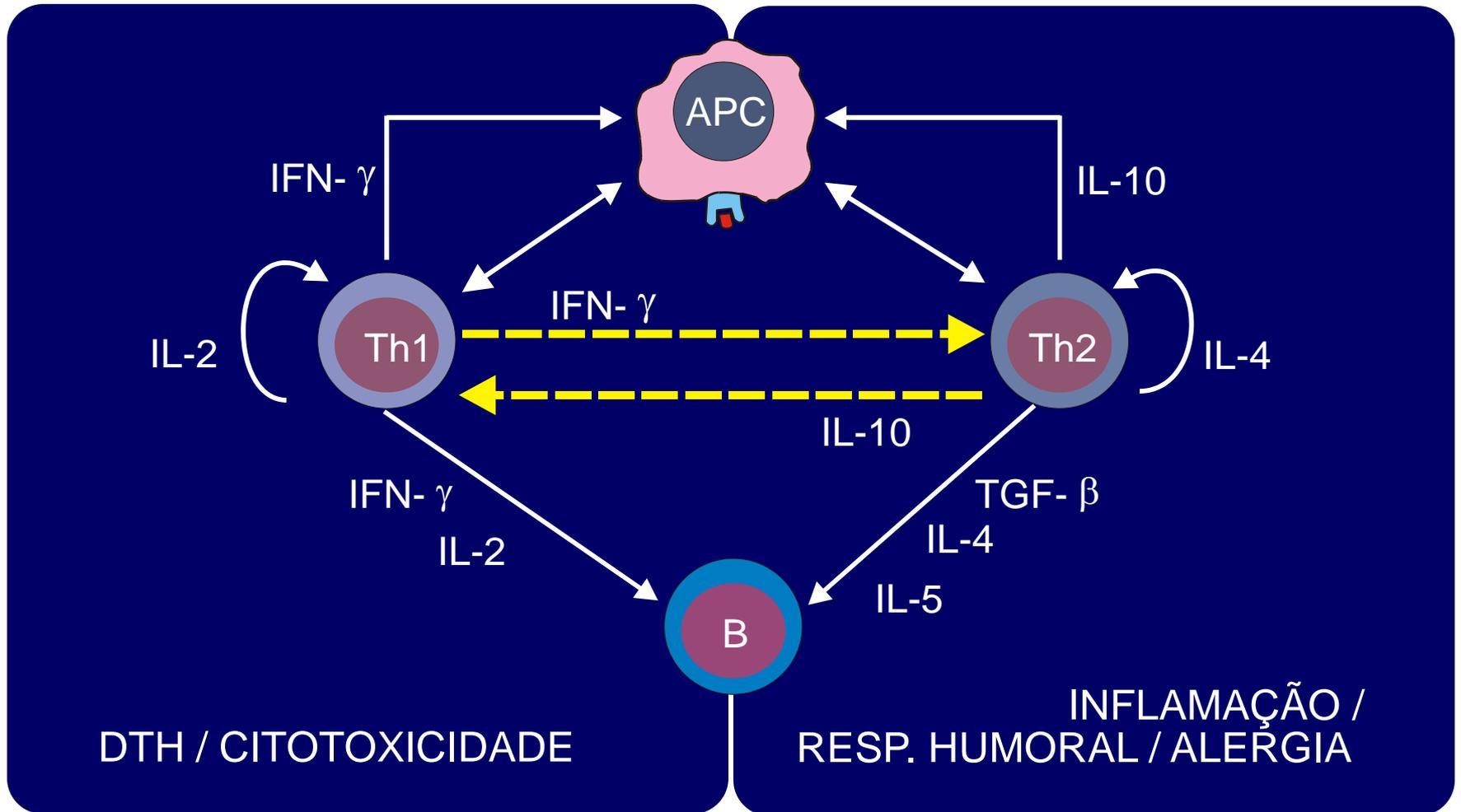
ATIVAÇÃO DOS LINFÓCITOS E PAPEL DAS CITOCINAS



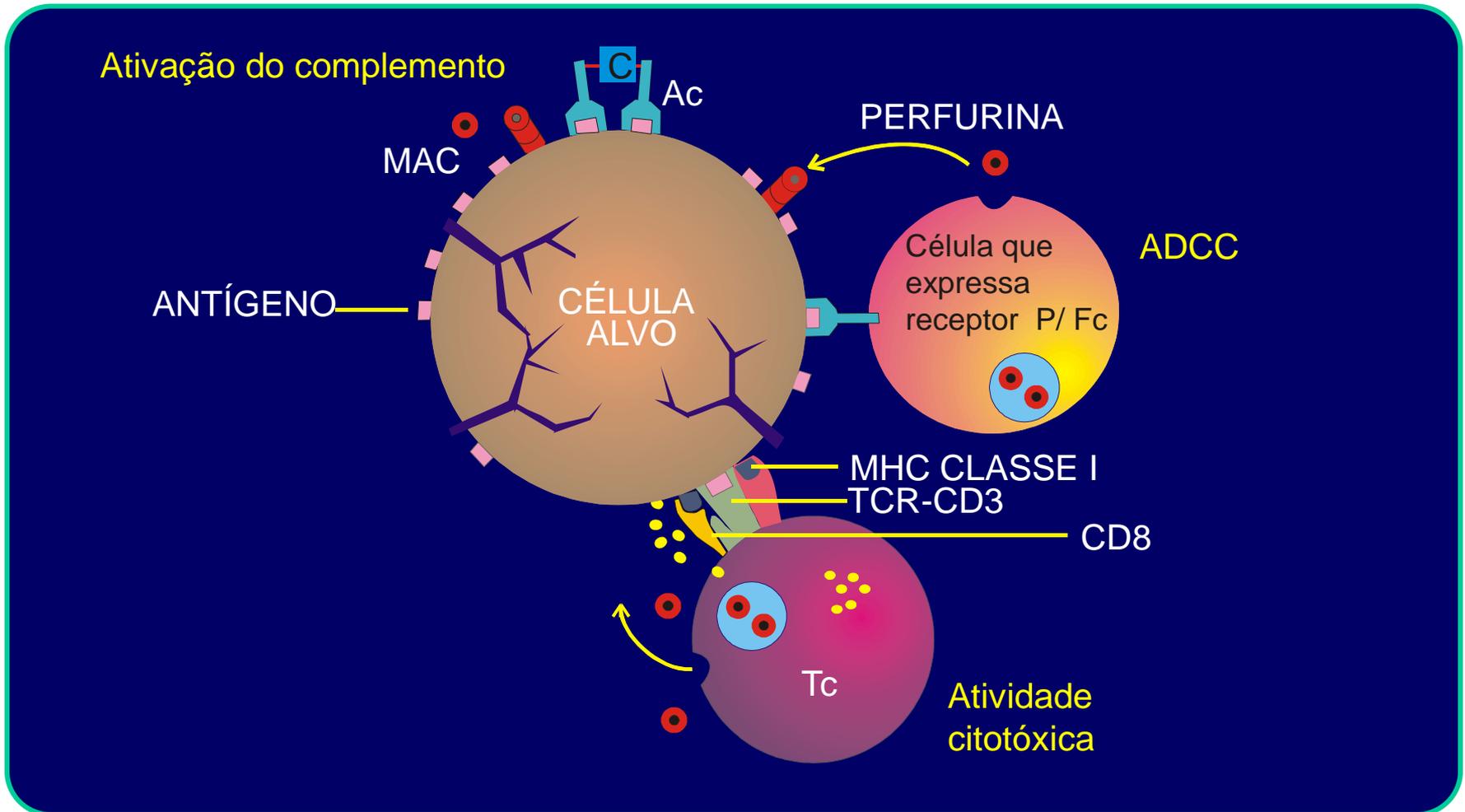
RESPOSTA Th1 E Th2



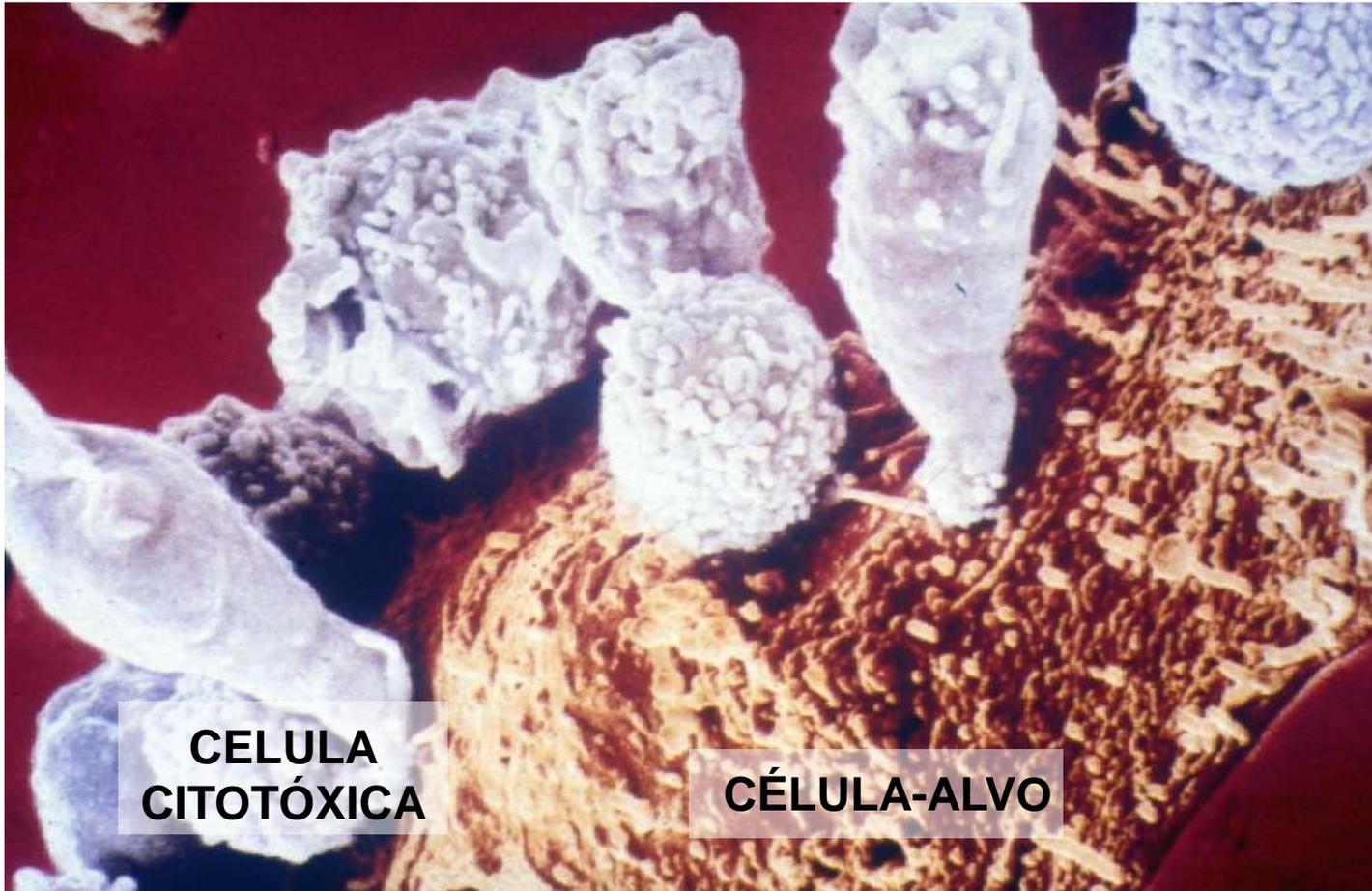
DIFERENCIAÇÃO E REGULAÇÃO (Th1 E Th2)



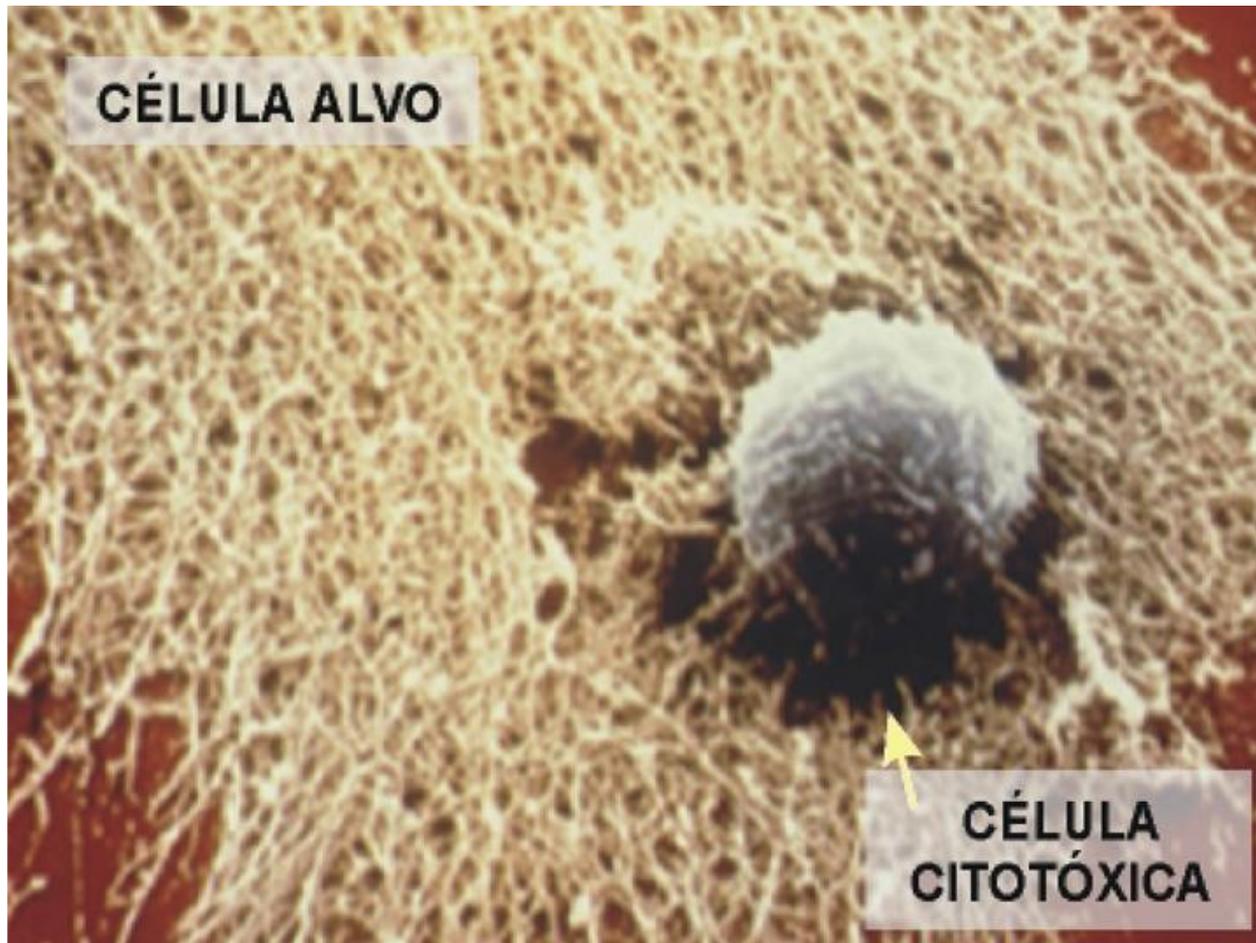
CÉLULA-ALVO E MECANISMOS CITOTÓXICOS

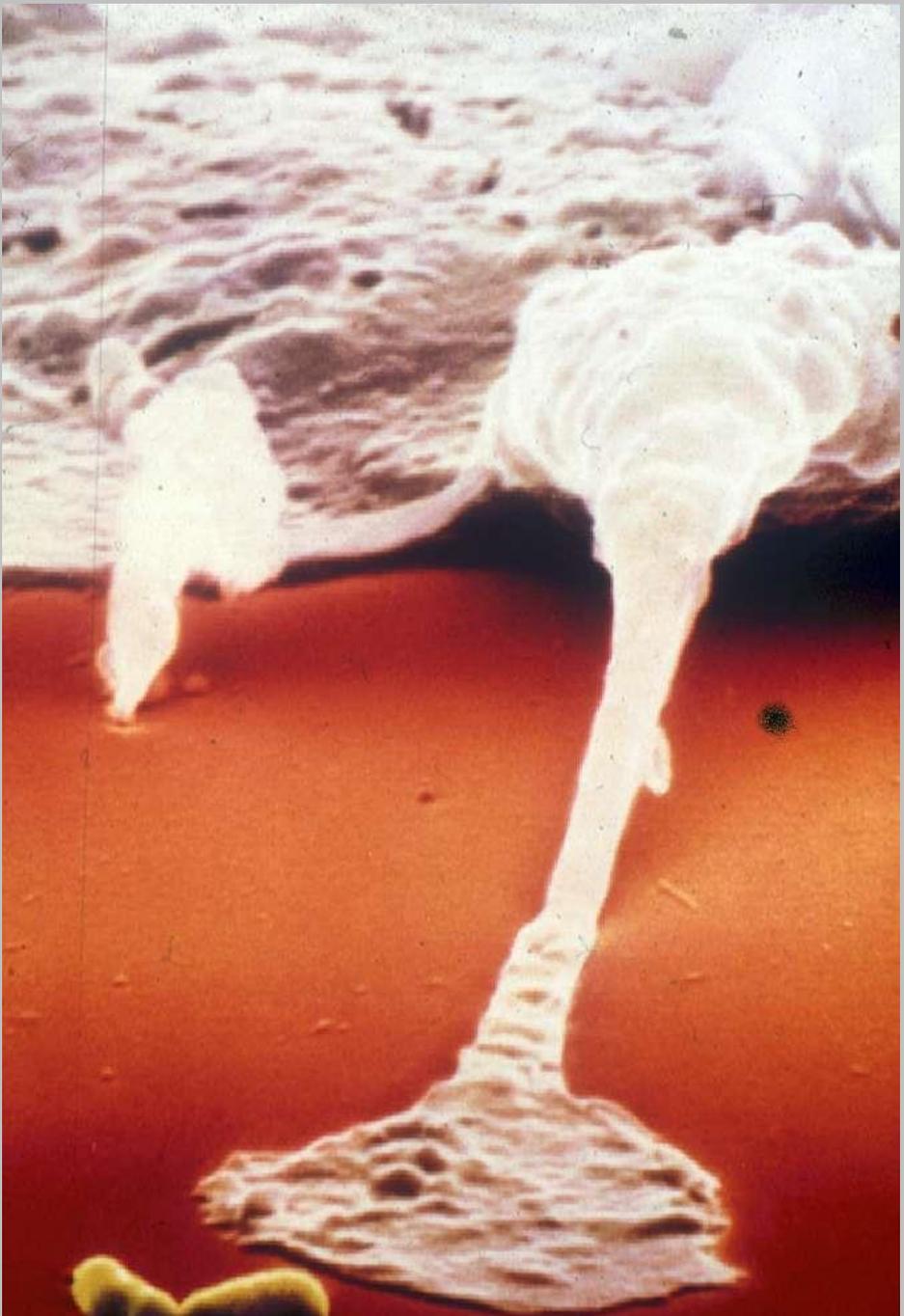


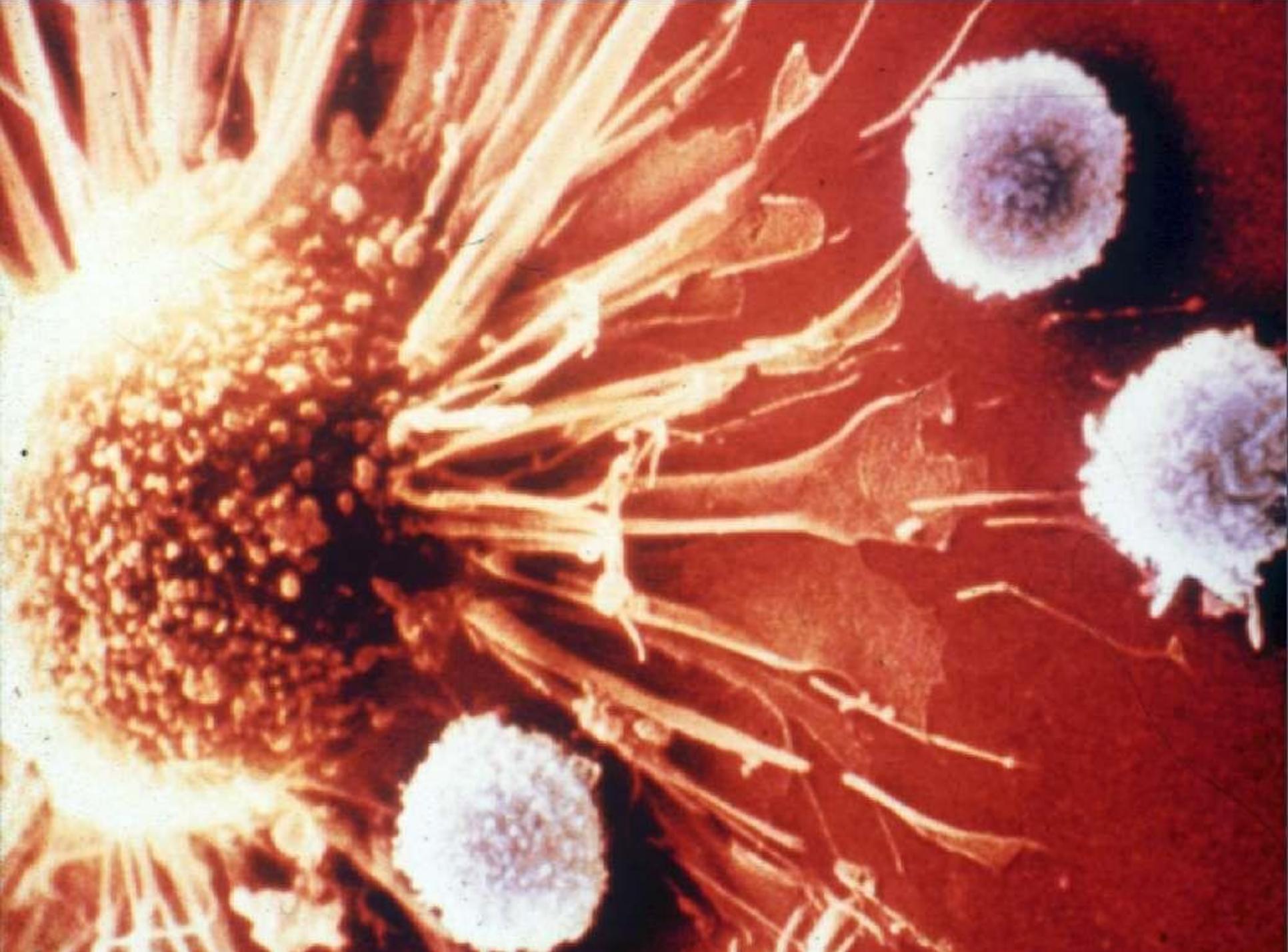
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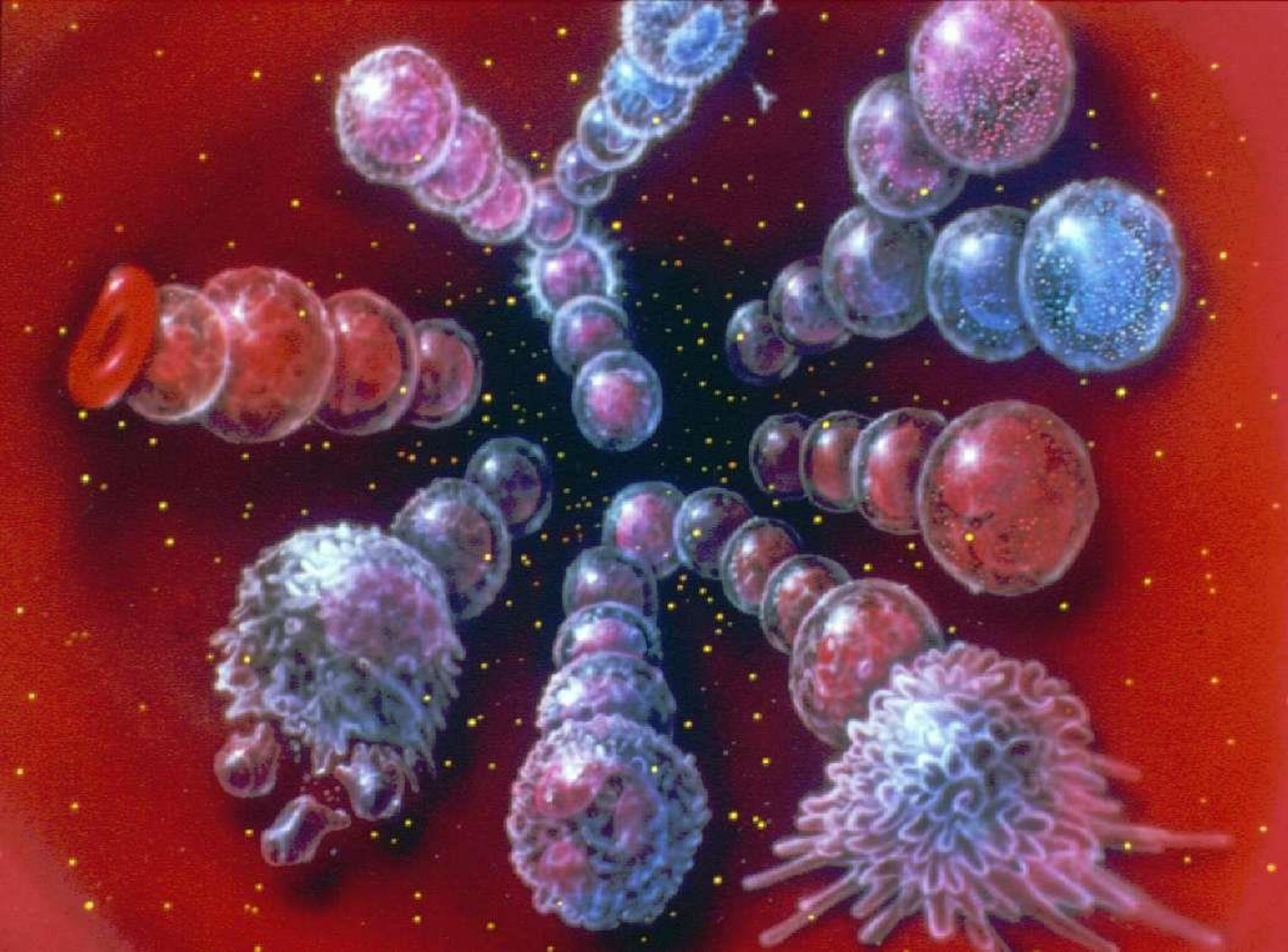


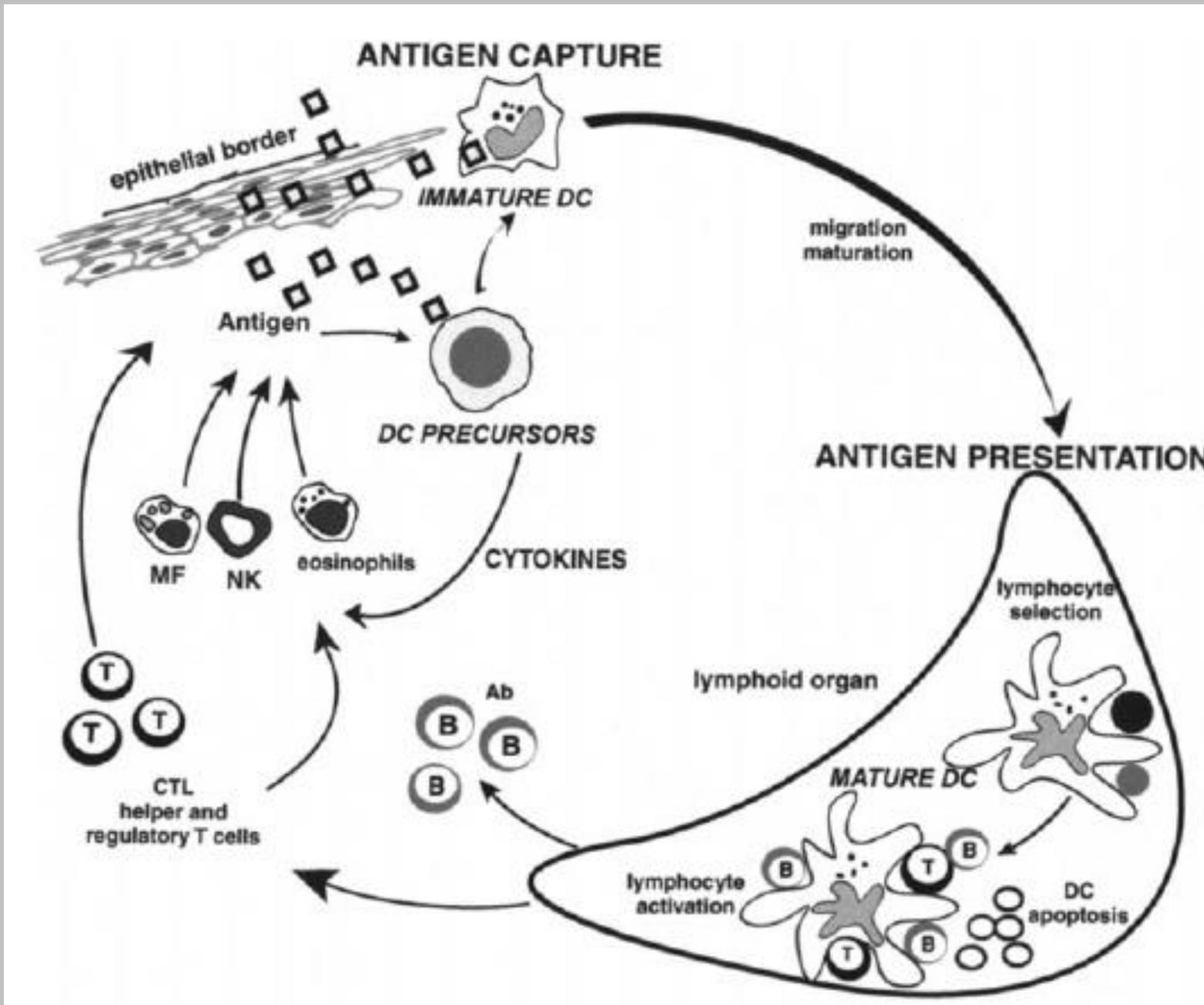
CÉLULA-ALVO E MECANISMOS CITOTÓXICOS



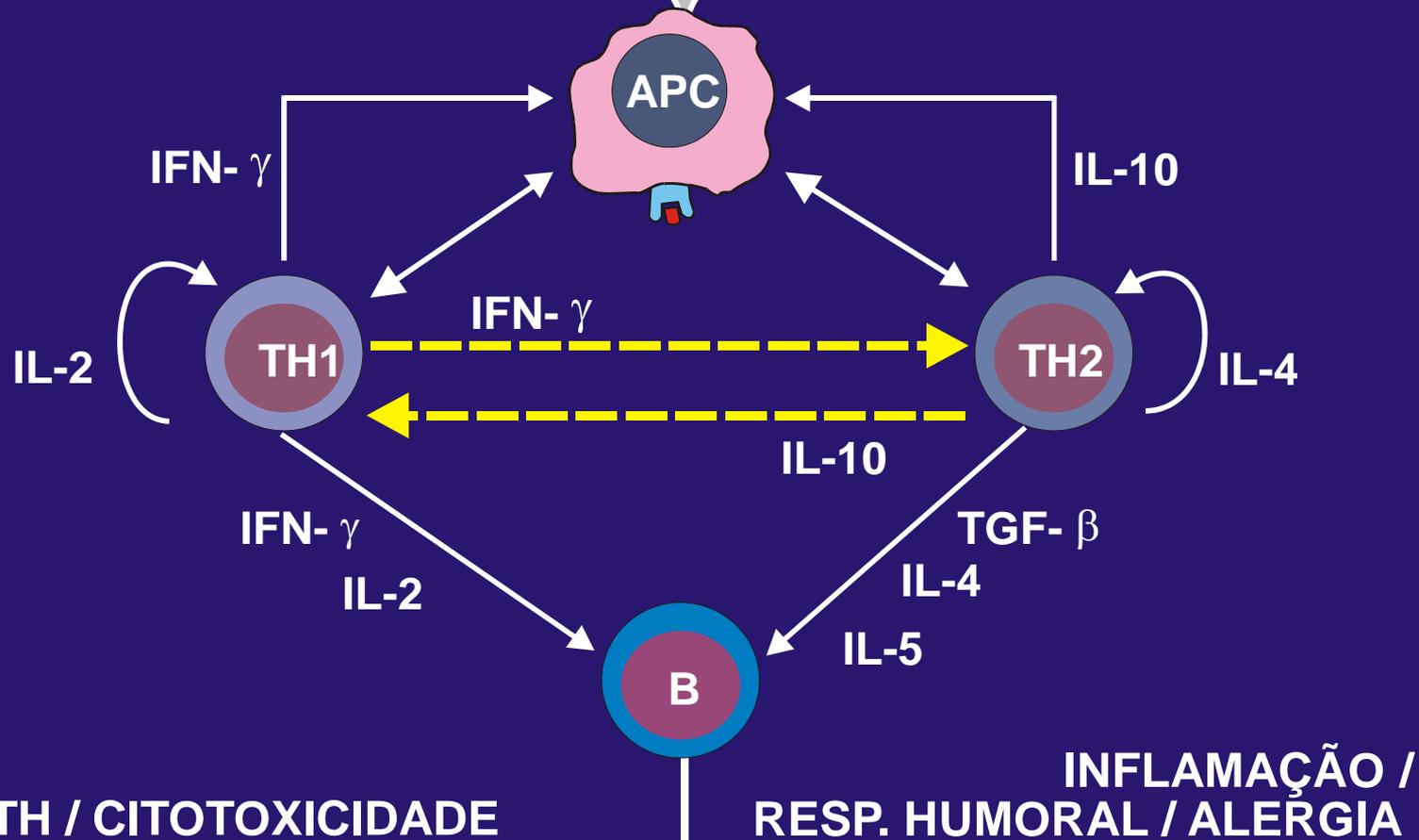








DIFERENCIAÇÃO E REGULAÇÃO (TH1 E TH2)

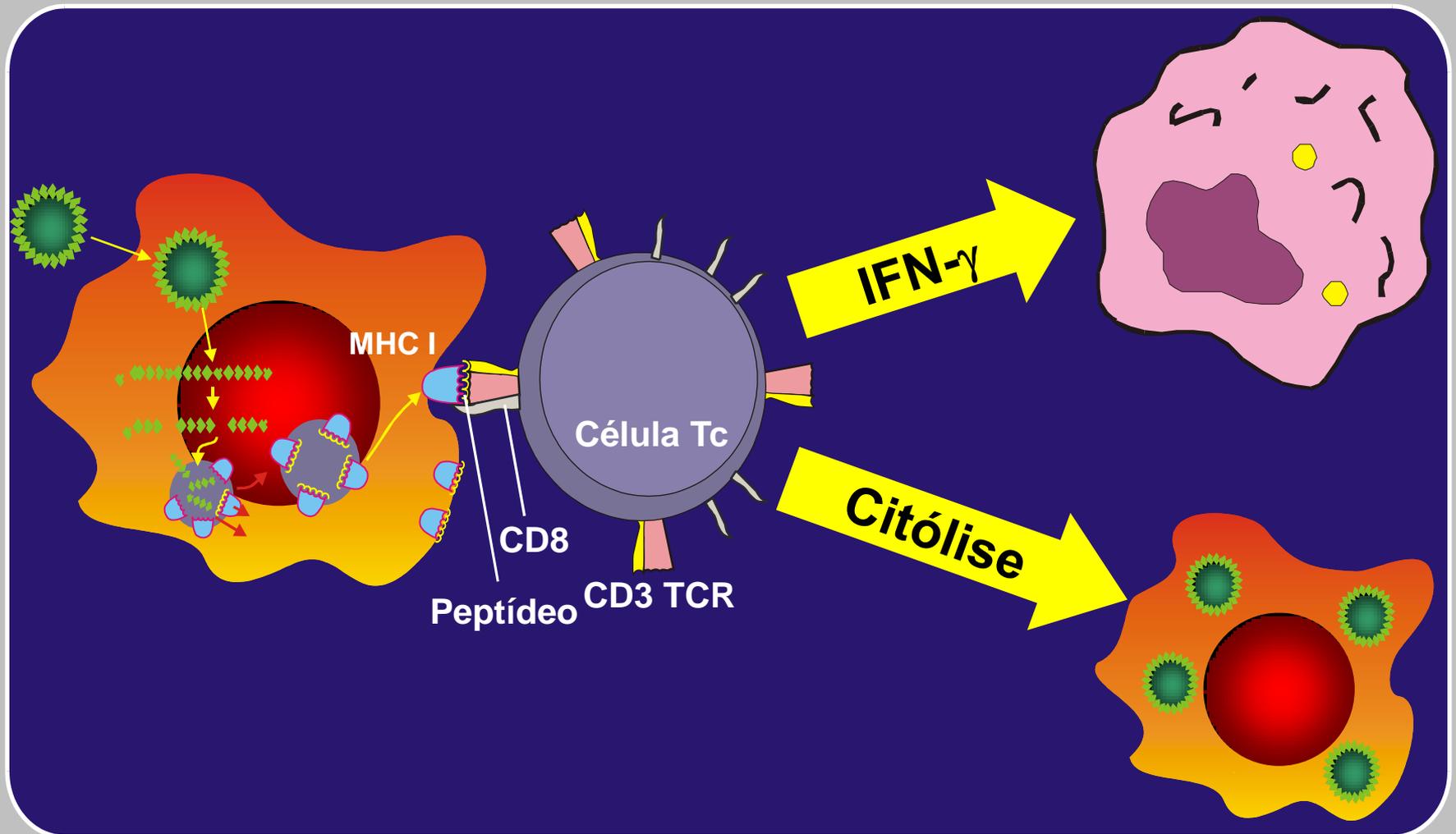


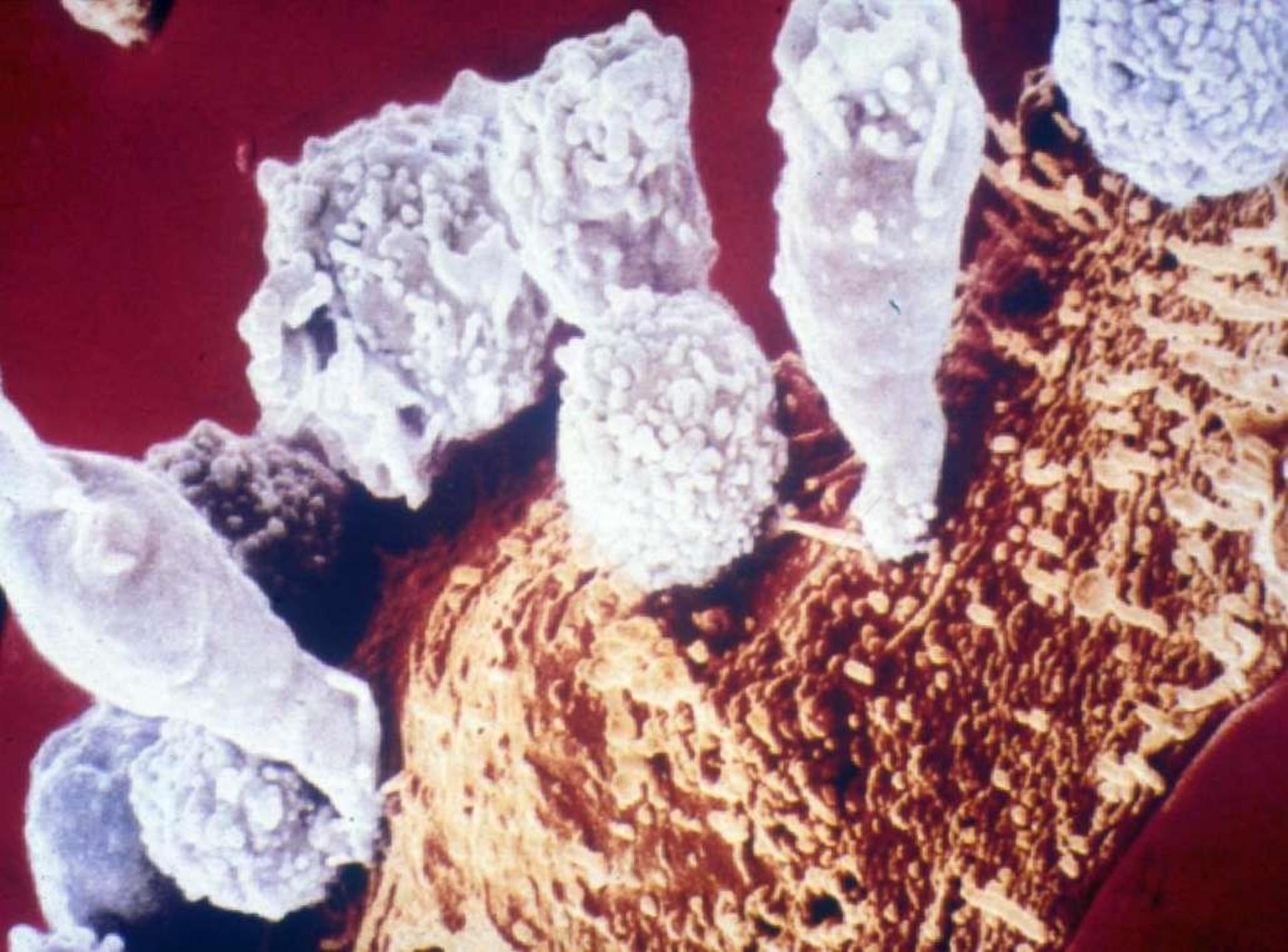
TIPOS DE RESPOSTA CD4 AUXILIAR (HELPER) - RESUMO

- TH1: IL-12 e INF (gama e beta), IL-2
- TH2: IL-4, IL-6, IL-10, IL-11 e IL-13
- TH17: IL-17, IL-6, IL-22 e TNF-alfa ---

Doenças autoimunes e resposta a
bactérias extracelulares

FASE EFETORA DA RESPOSTA IMUNE CELULAR

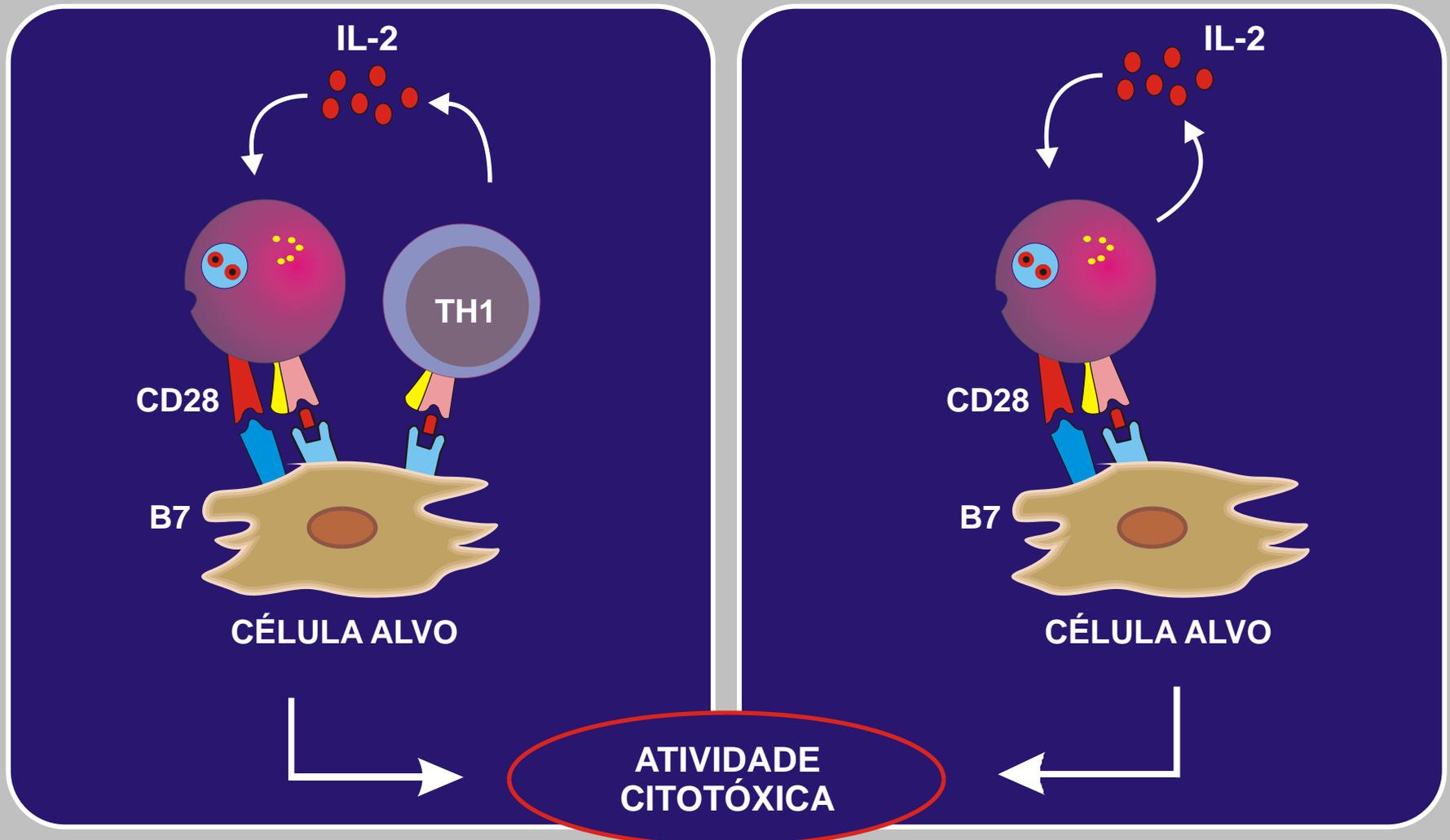




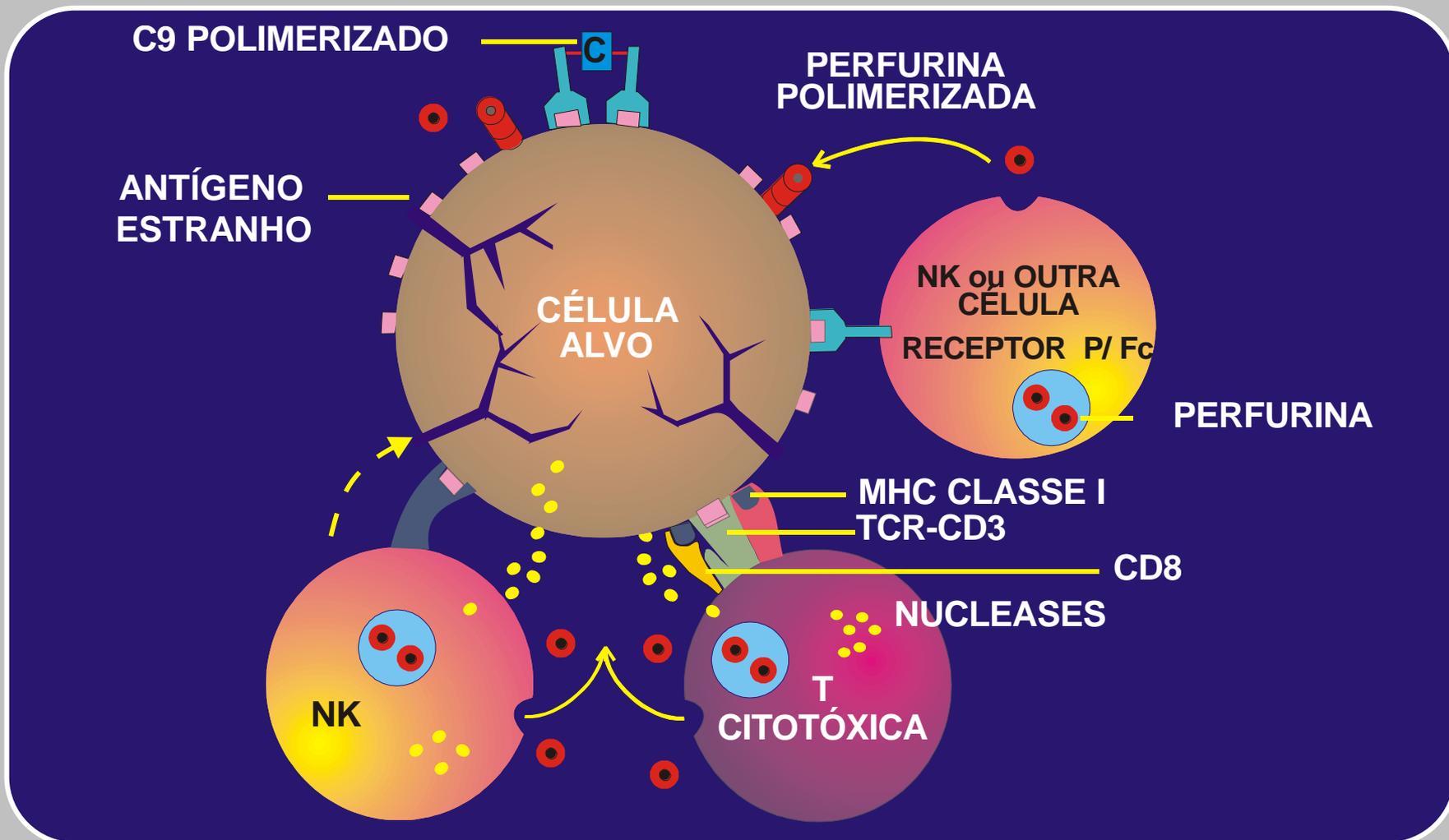
IL-2 NA PROLIFERAÇÃO DA CTL

NAIVE

MEMÓRIA



CÉLULA ALVO E MECANISMOS CITOTÓXICOS



FUNÇÕES DA CELULA T CD8+

Citocinas

IFN γ
IL-2
TNF- α
MIP1 β

Grânulos citotóxicos

Core:

Proteoglycan
Perforin
Granzymes
Granulyan

Granule membrane proteins

CD107a and b (LAMP-1 & 2)
CD63
Numerous others

