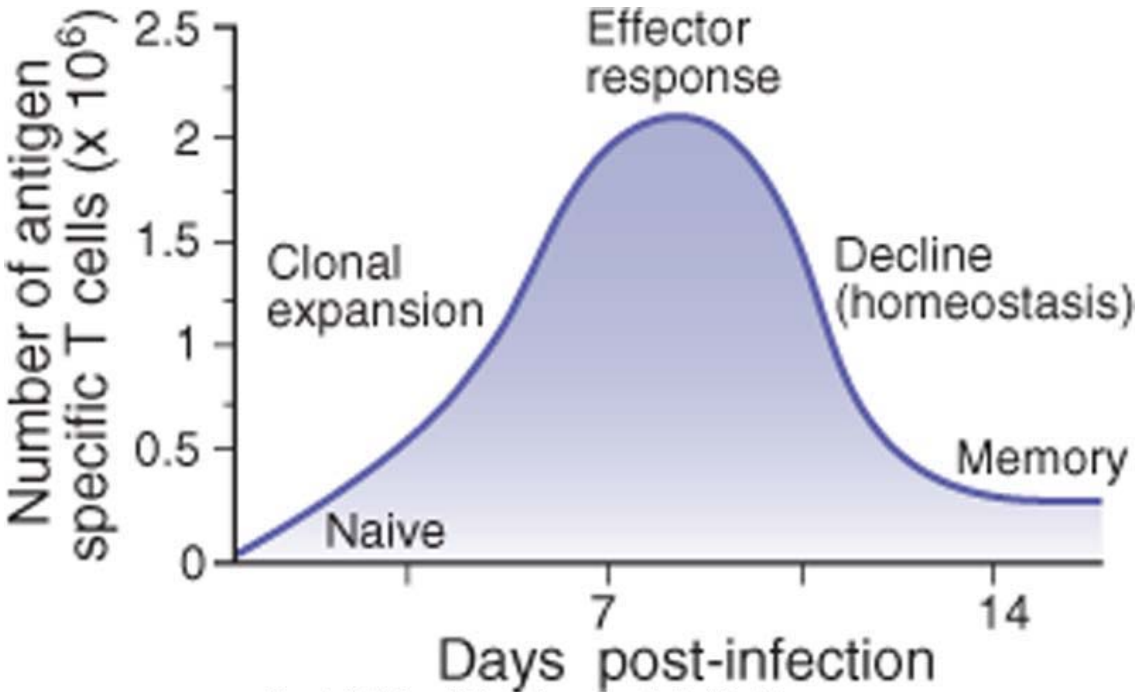
ICB5732

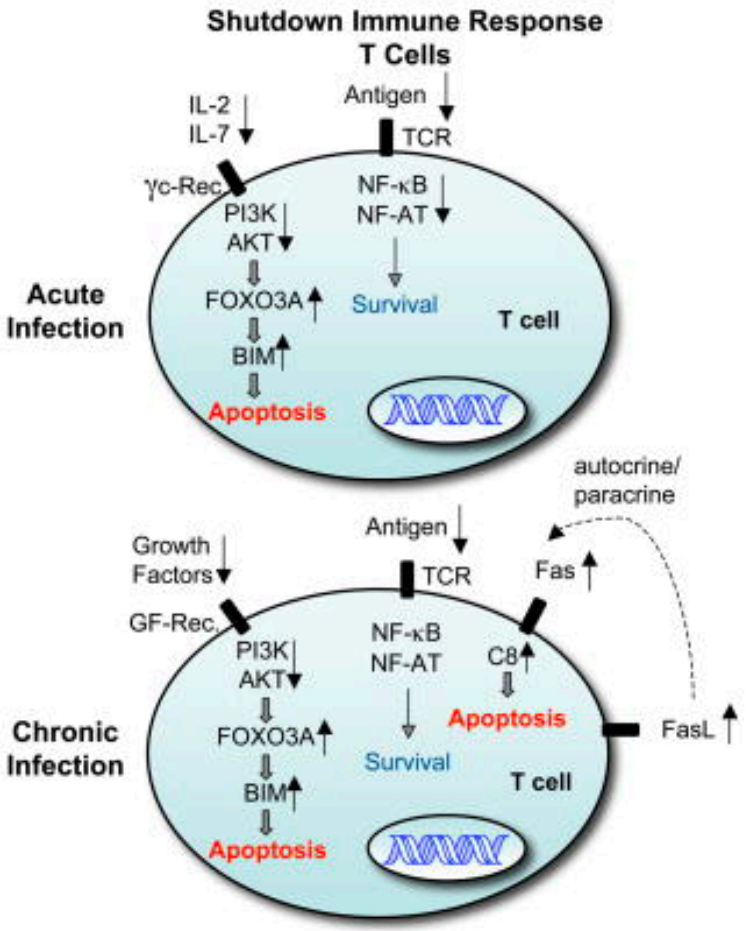
Regulation of immune responses

Ana Paula Lepique

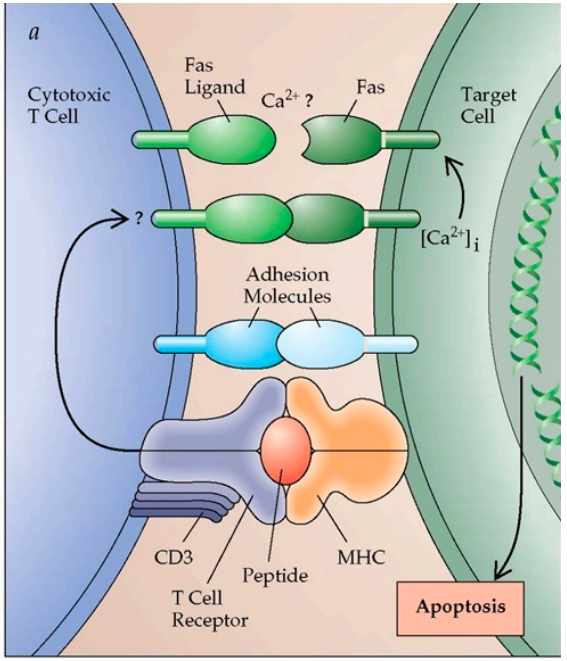
REGULATION IN T CELLS



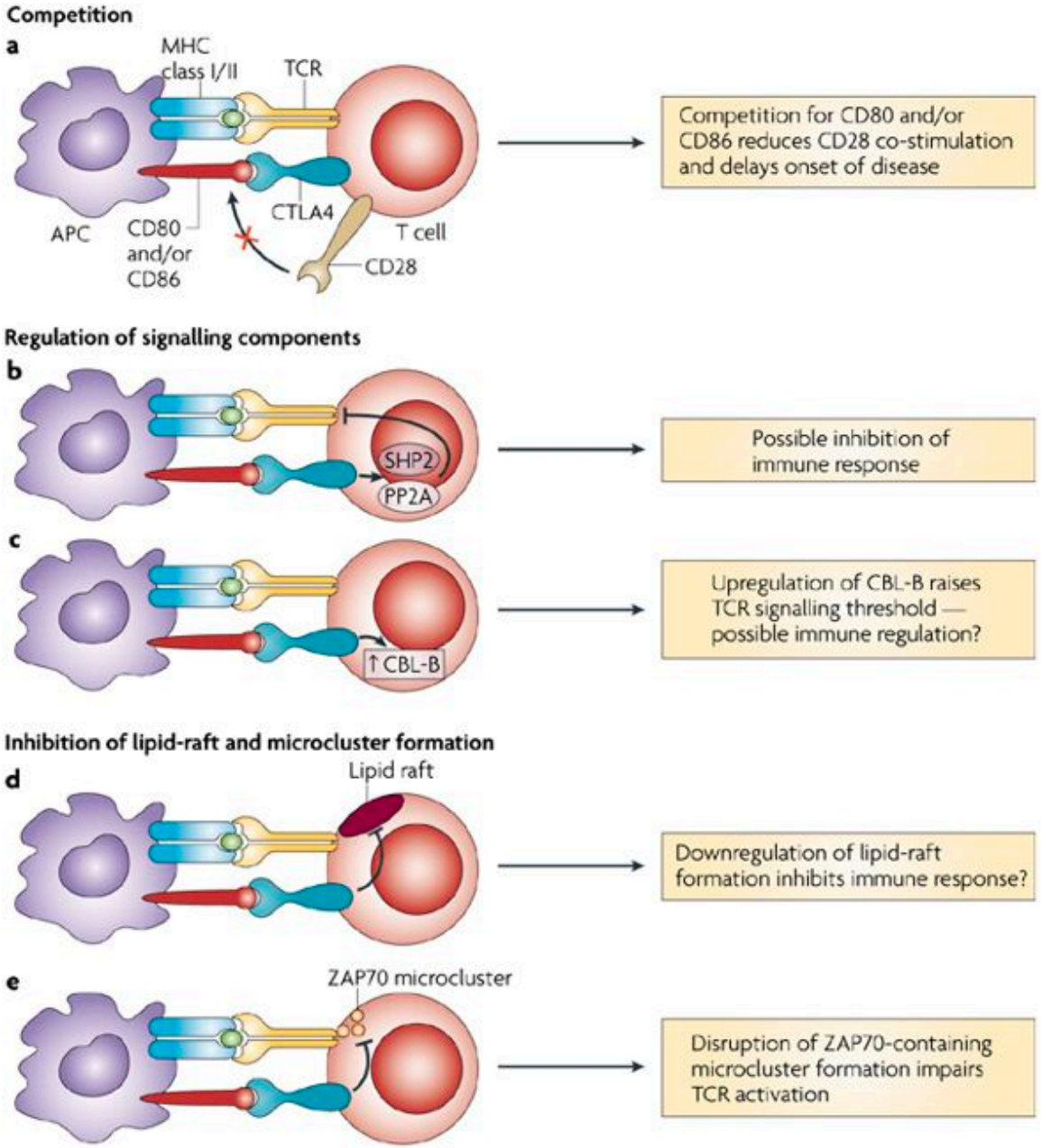
Cell death induction by Fas/FasL



tipo selvagem FAS-/- tipo selvagem FAS-/- tipo selvagem FAS-/-



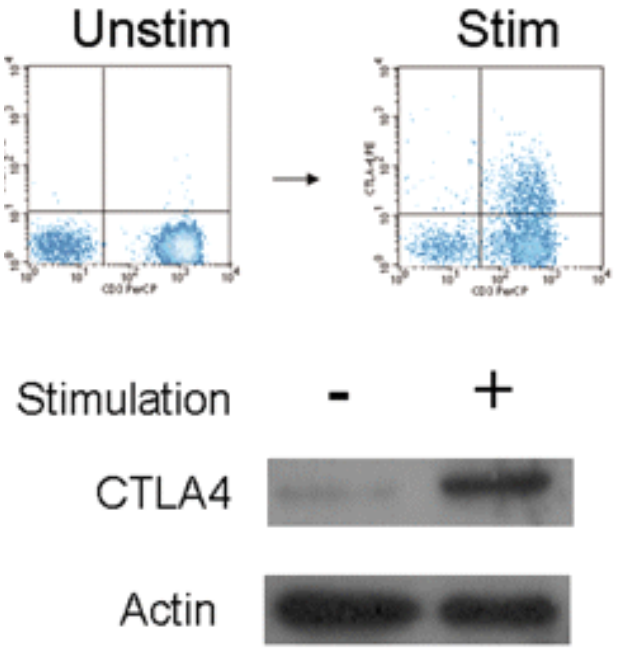
CTLA-4 - Cytotoxic T Lymphocyte Associated Protein 4

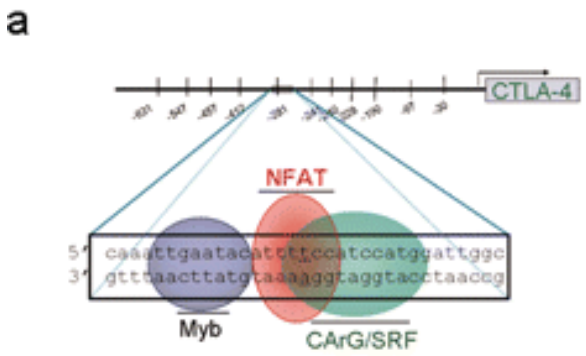


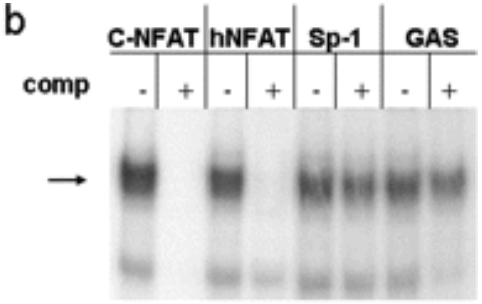
The reverse stop-signal model for CTLA4 function. Christopher E. Rudd. Nature Reviews Immunology volume 8, pages 153–160 (2008)

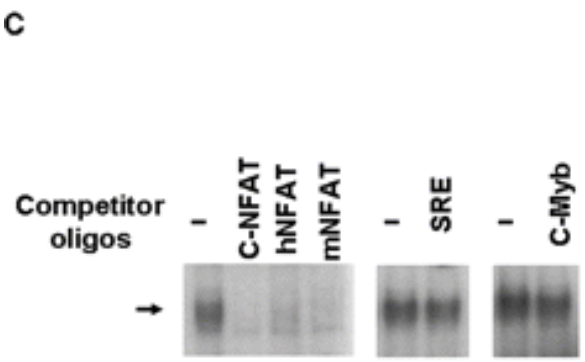
CTLA4 expression control is dependent on NFAT, but not AP-1

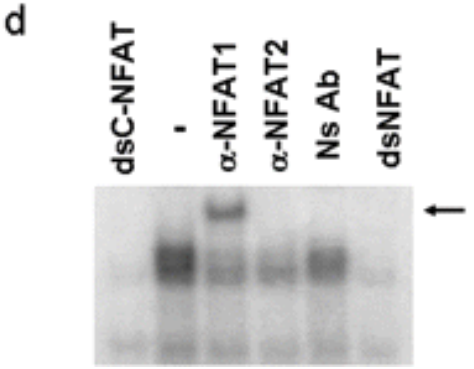
T cell stimulation



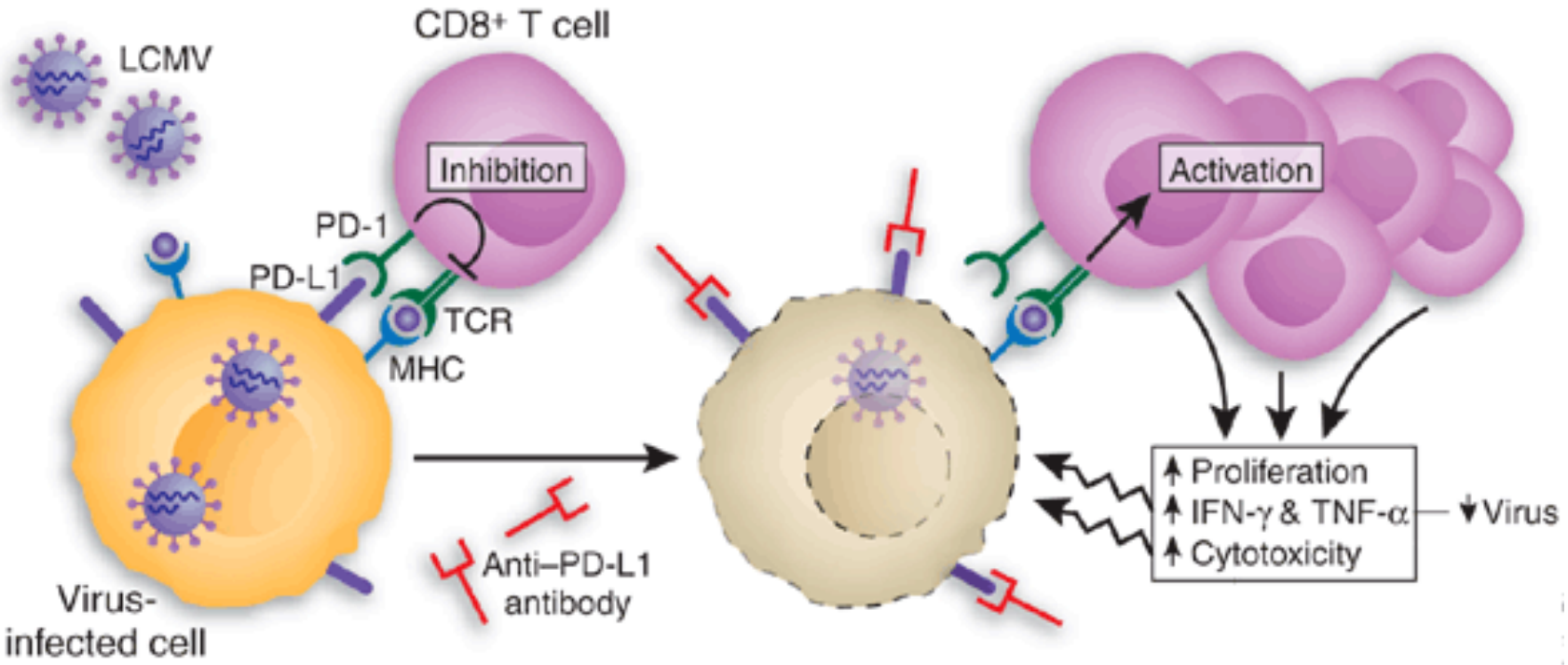




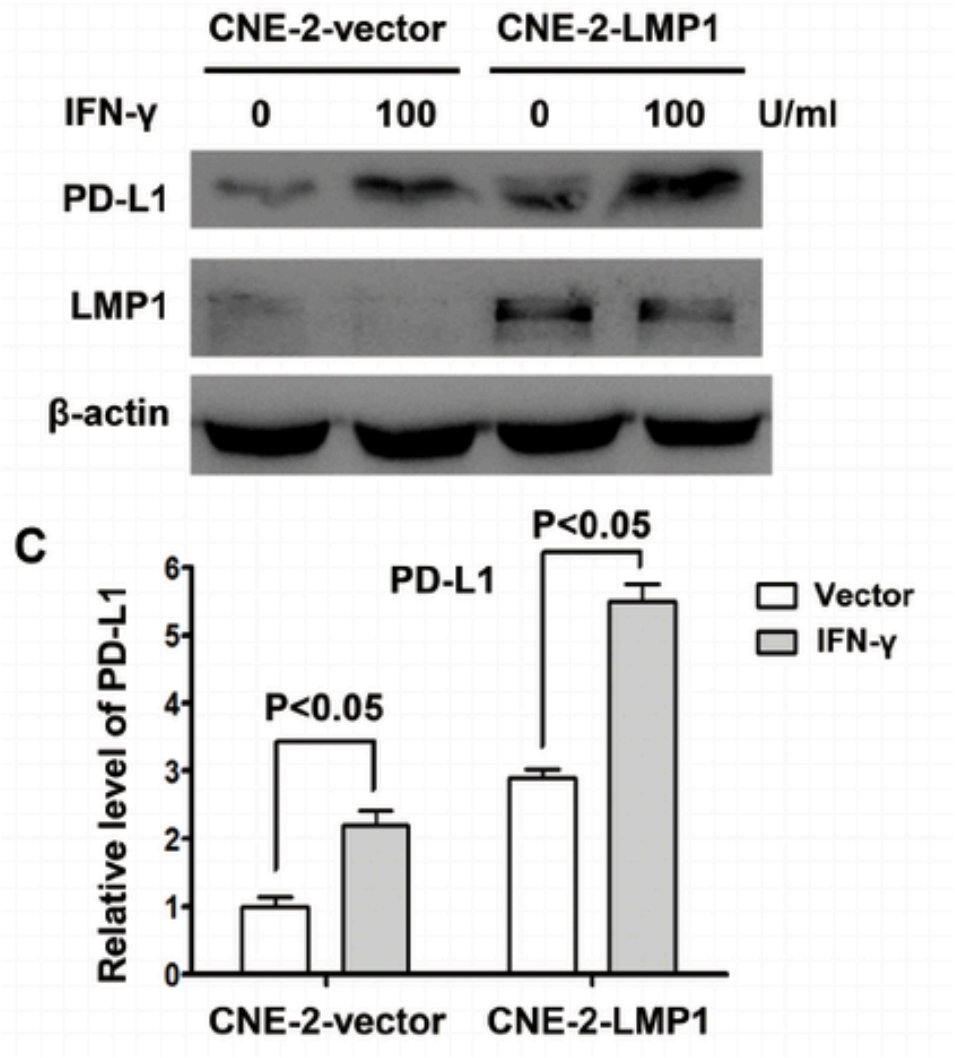




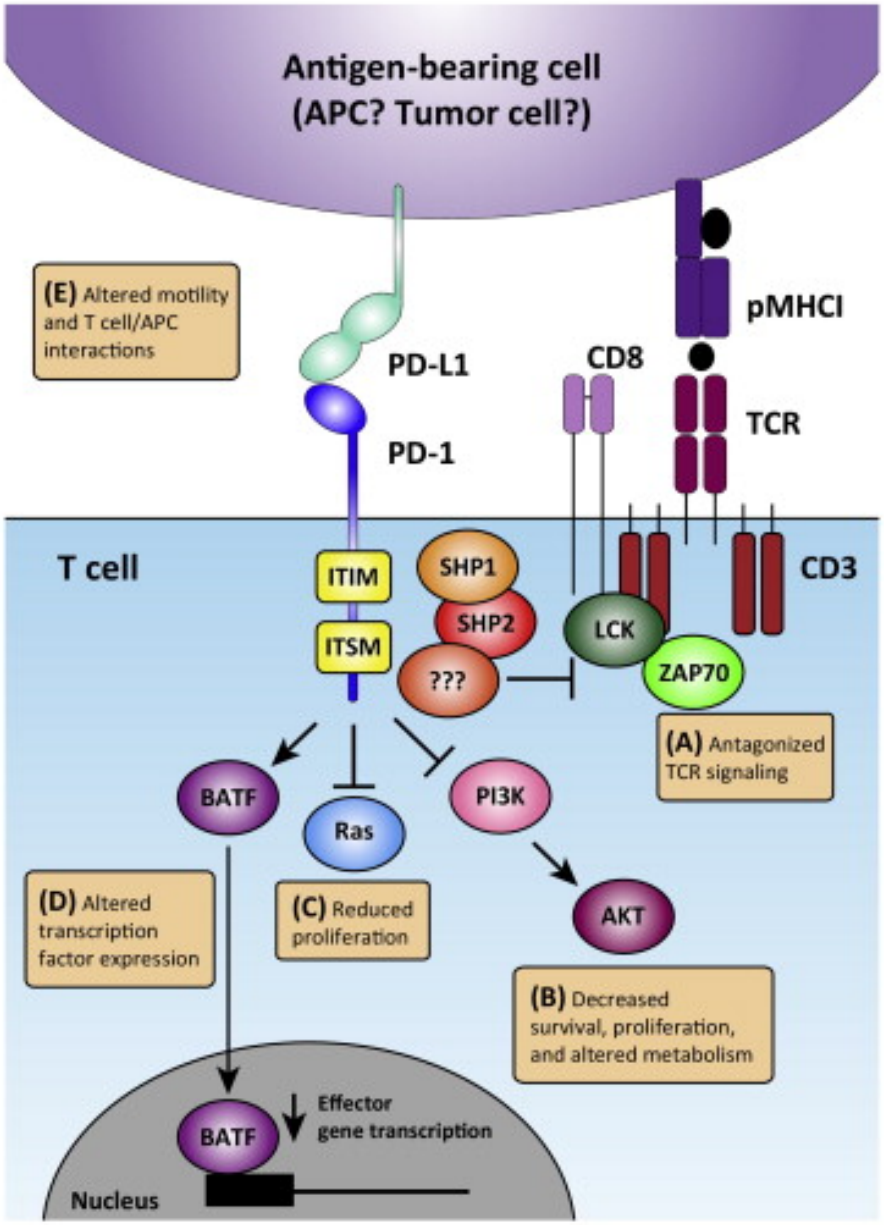
PD-1/PD-1L


LCMV
CD8+ T cell
Inhibition
PD-1
PD-L1
TCR
MHC
Virus-
infected cell
Anti–PD-L1
antibody
Activation
Proliferation
IFN-γ & TNF-α
Cytotoxicity
Virus

Viral proteins and IFNγ can cooperate to induce PD-L1 expression



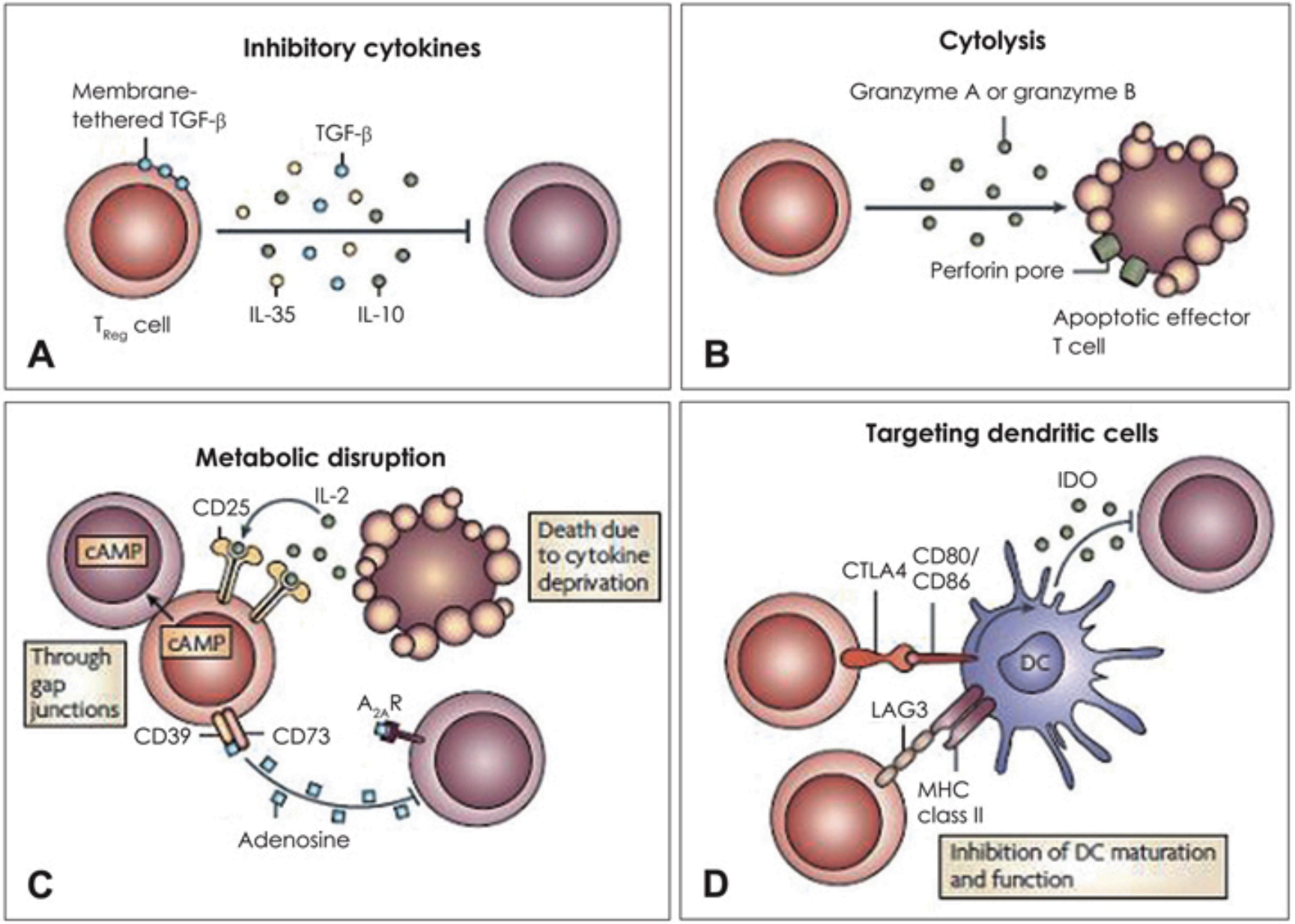
PD-1 mechanism of action



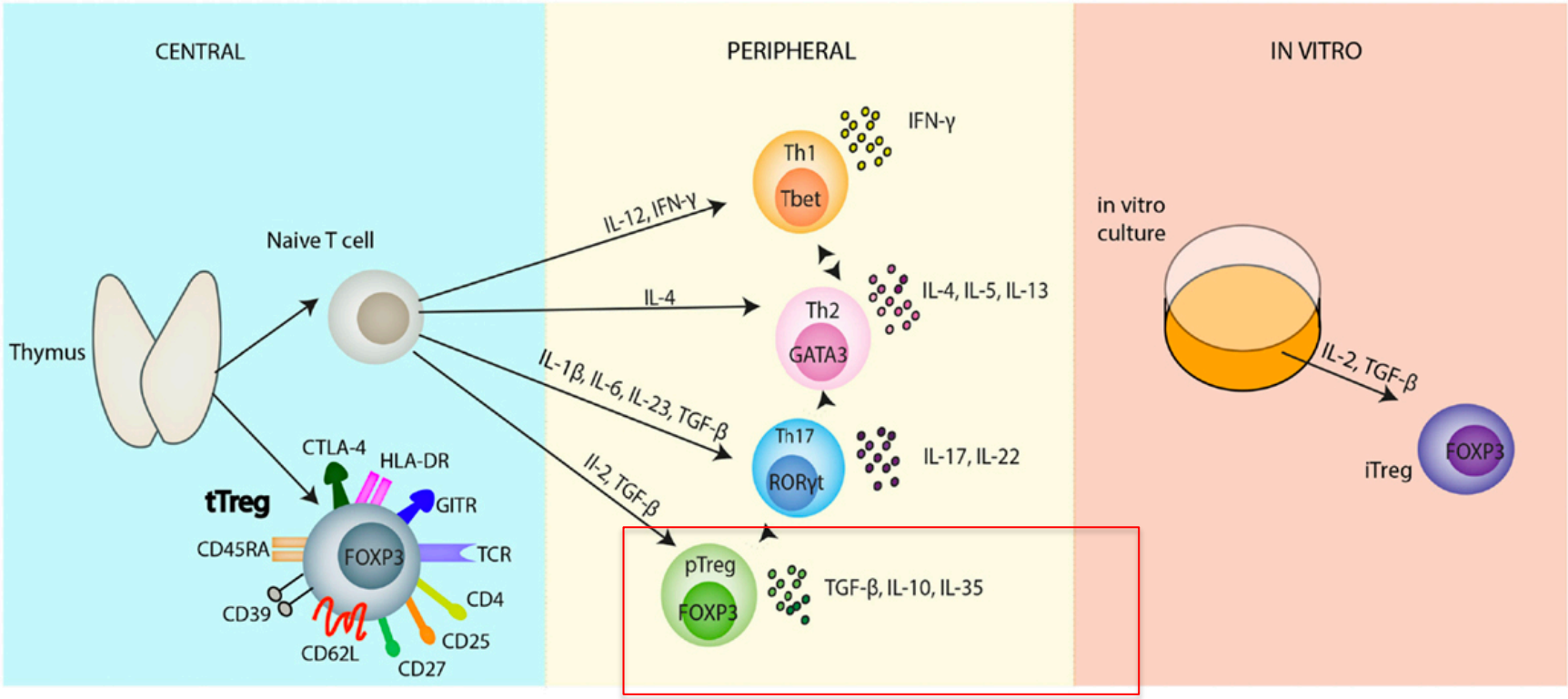
TRENDS in Immunology

Cell PRESS

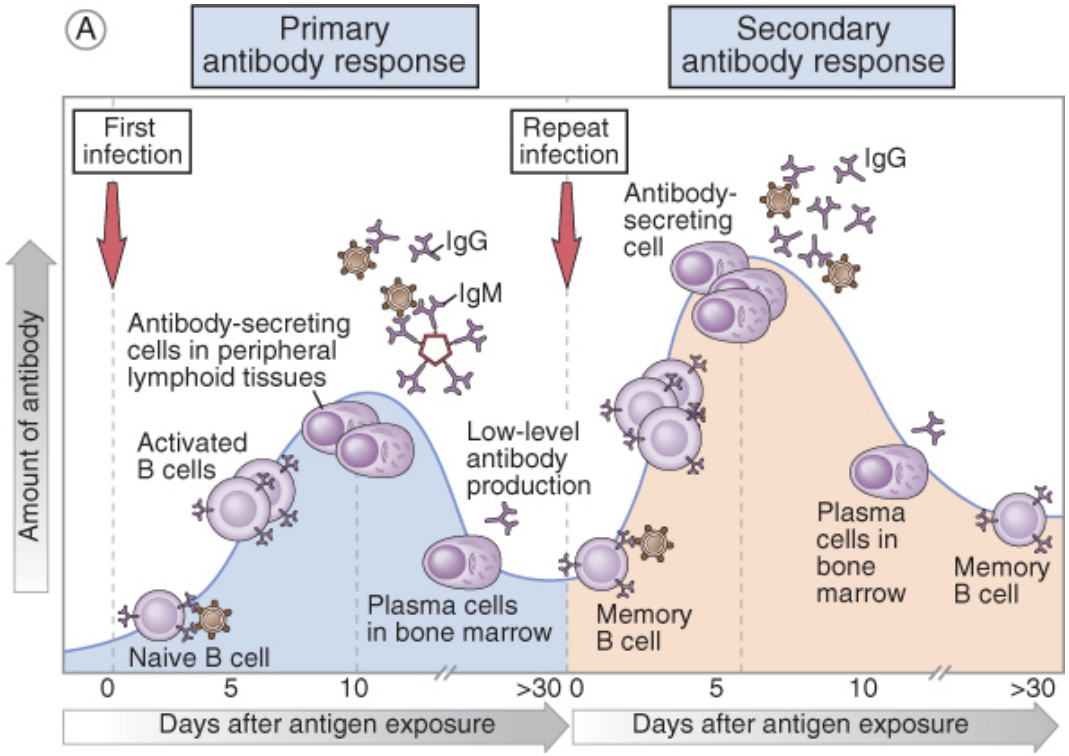
REGULATORY T CELLS



INDUCED REGULATORY T CELLS – differentiation in the periphery



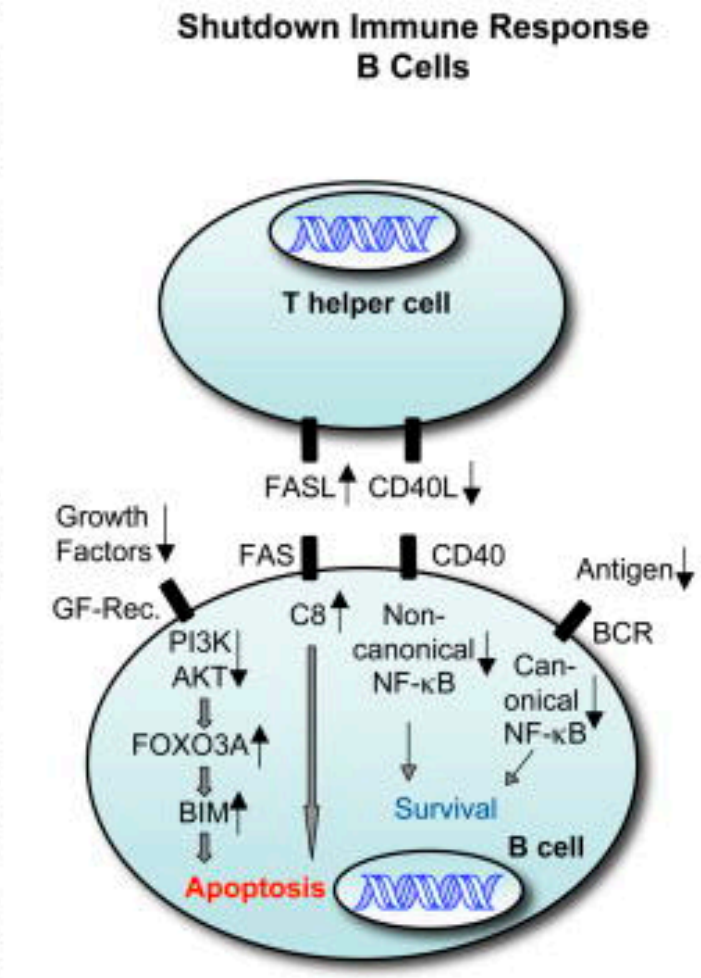
REGULATION IN B CELLS



B

	Primary response	Secondary response
Lag after immunization	Usually 5-10 days	Usually 1-3 days
Peak response	Smaller	Larger
Antibody isotype	Usually IgM>IgG	Relative increase in IgG and, under certain situations, in IgA or IgE (heavy chain class switching)
Antibody affinity	Lower average affinity, more variable	Higher average affinity (affinity maturation)

CELL DEATH INDUCED BY FAS/FASL



B lymphocyte control by FcγRIIB