

IS

Lymphopoiesis

BONE MARROW

① EARLY IMMUNE RESPONSE

M⁺
D⁺
T⁺
B⁺

Hematopoietic SC

Lymphoid Progenitor

BSC



PnB
- HEAVY CHAIN
GIVE RECOGNITION



PnE⁻



γ⁺ will not only 1 Ag



IMMUNE B
- LIGHT CHAIN



CD79a
CD79b

Ag

MATURE (yin/yang) B

- ISOMERIC
STRUCTURE

- HYPERMUTANT

- PnM⁺
- D⁺
- T⁺

PnIFN
- D⁺

T⁺

PnT⁺

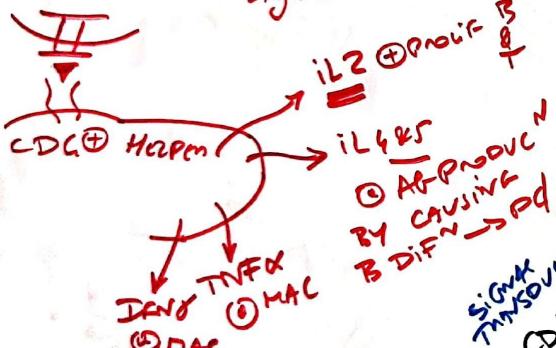
PC

② LATER IMMUNE RESPONSE

MAC



endosomal
lysosomal
tyrosine fragments

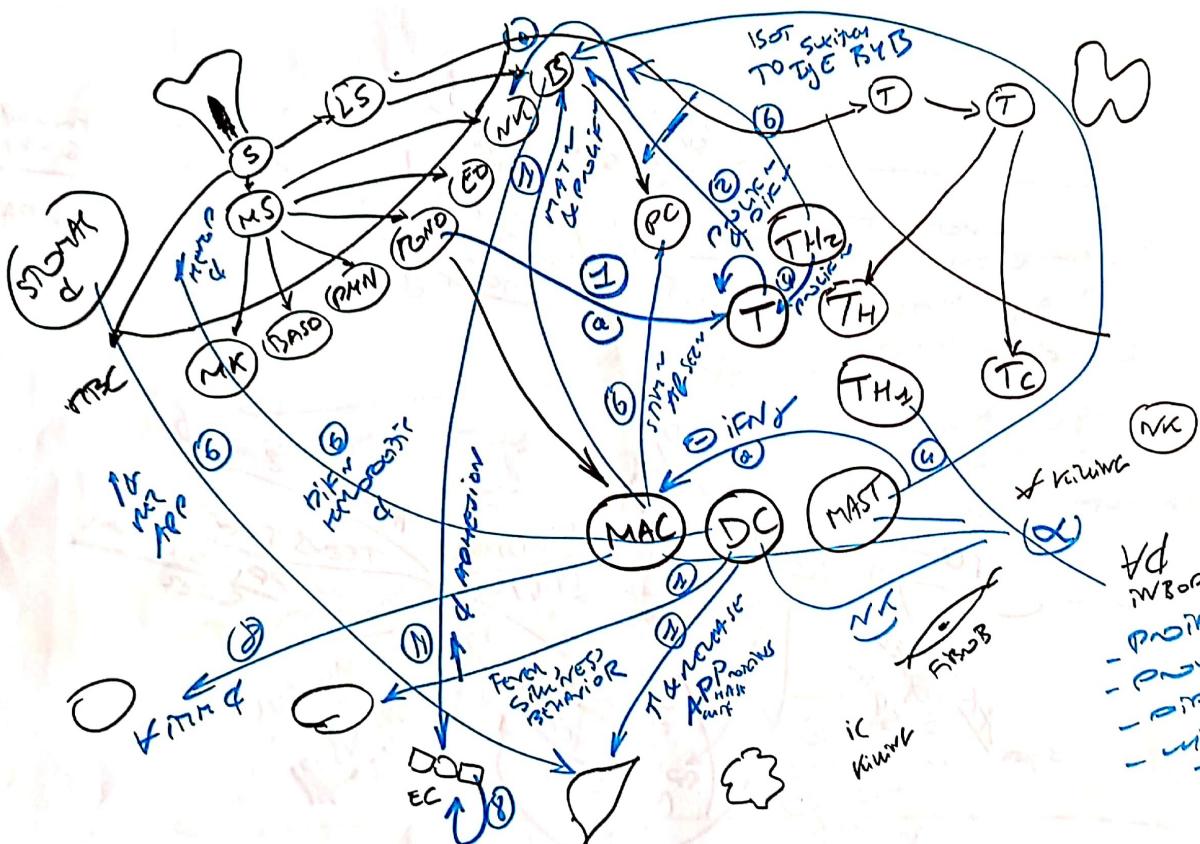


CORE REA
MK5 CT strands of CH
SPliced OUT → isoforms
extremes of E or x α
→ more, given D⁺
PnT⁺ selection
immunity, high rate
V_H & V_K or V_D
⇒ ⇒ AFFINITY

MIGRATION TO:
• OUTSIDE LN
• LYMPH NODE SPLURSE = GALT
• GUT ASSOCIATED LYMPHOID TISSUE & AXIAL Ag EXPOSURE

SOLVED
Cytokine & Activity

iL(C)
TNF α
TGF β
IFN γ
MCP
MIP
GM-CSF



- DA IN BODY
 - PROFOUND ACTIONS
 - PAINFUL &
 - DESTRUCTIVE
 - INFLAMMATORY

- ④ & CT
- ②
- ① HIS ACT BY CATS
- ③ TGF β BY T H_2
- ⑤ TGF β AN HOMOGENEIS

TrFx

TGF β

T
L_{NO}

L_{NO}
M_{TC}
B
various c

CT L_{NO}
— MAC & R_M \rightarrow ↑
P_{DN} Ig A ↑
P_{DN} various c

IFN γ

TH₁

T
C
NK

B
MAC

PROT TH₁ & P_{DN} TH₂
ISST SWIT C BY B
(\ominus) & EXP_N MHC B_M ↑

MCP

EC
FIBOB
S_{TC}

L_{NO}
T
NK
M_{TC}
B_{ASO}
CD₁

CT L_{NO}
— T
— NK
(\ominus) M_{TC}
P_{DN} M_{TC} ↓
(\ominus) CD₁

MIP

M_{TC}

N_{UT}
T_{ERMO}
P_{TC} ♀

CT V
(\ominus) HEMATOPOEIS

G-CSF

TH₁

GRANUL
L_{NO} c
M_{TC} ♀

POLYEN & D_{IC}
POLYF

