

czynniki środowiskowe

limfocyty S  
specyficzne  
narządowe

limfocyty S

T4  
T3

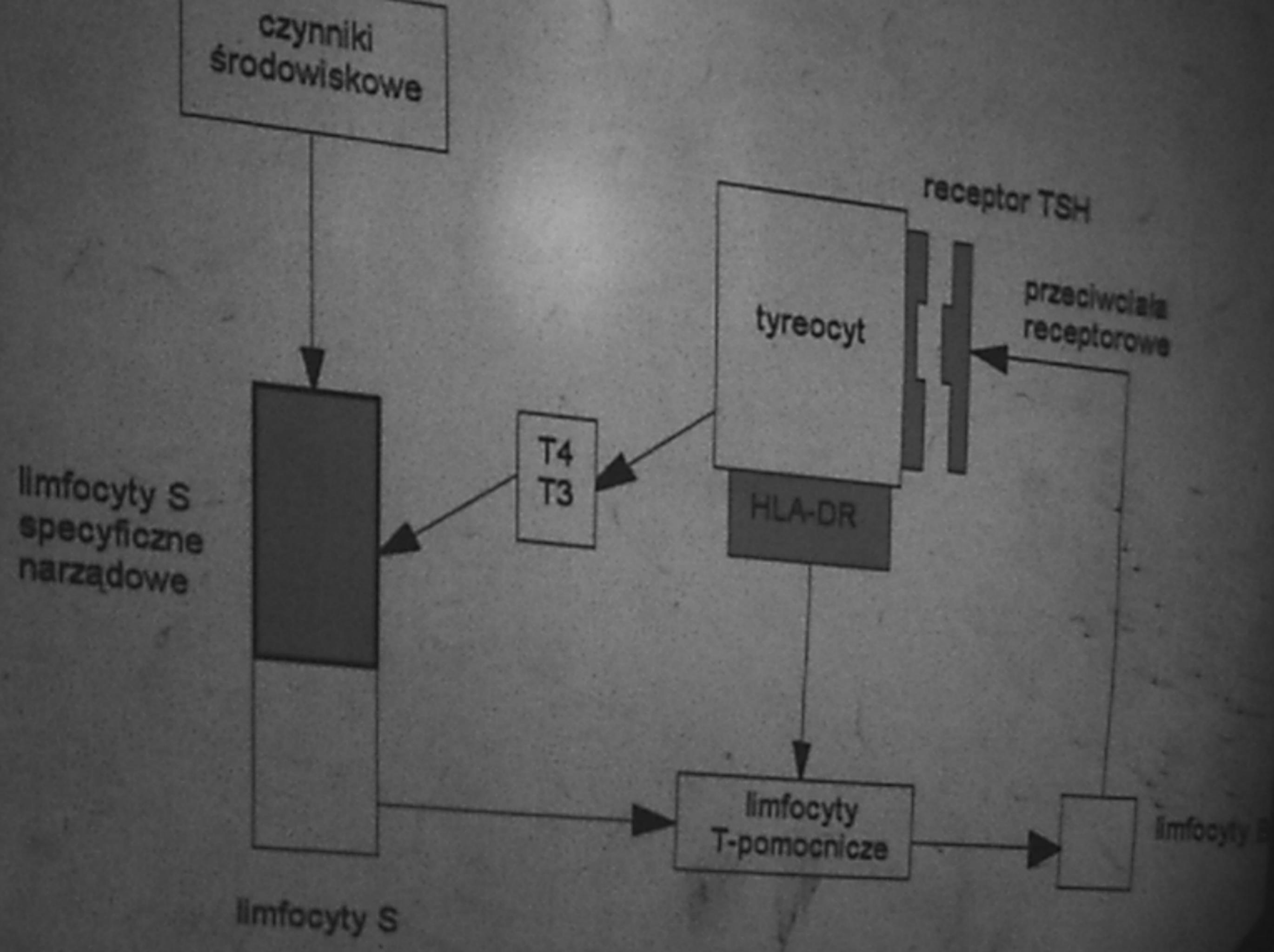
tyreocyt  
HLA-DR

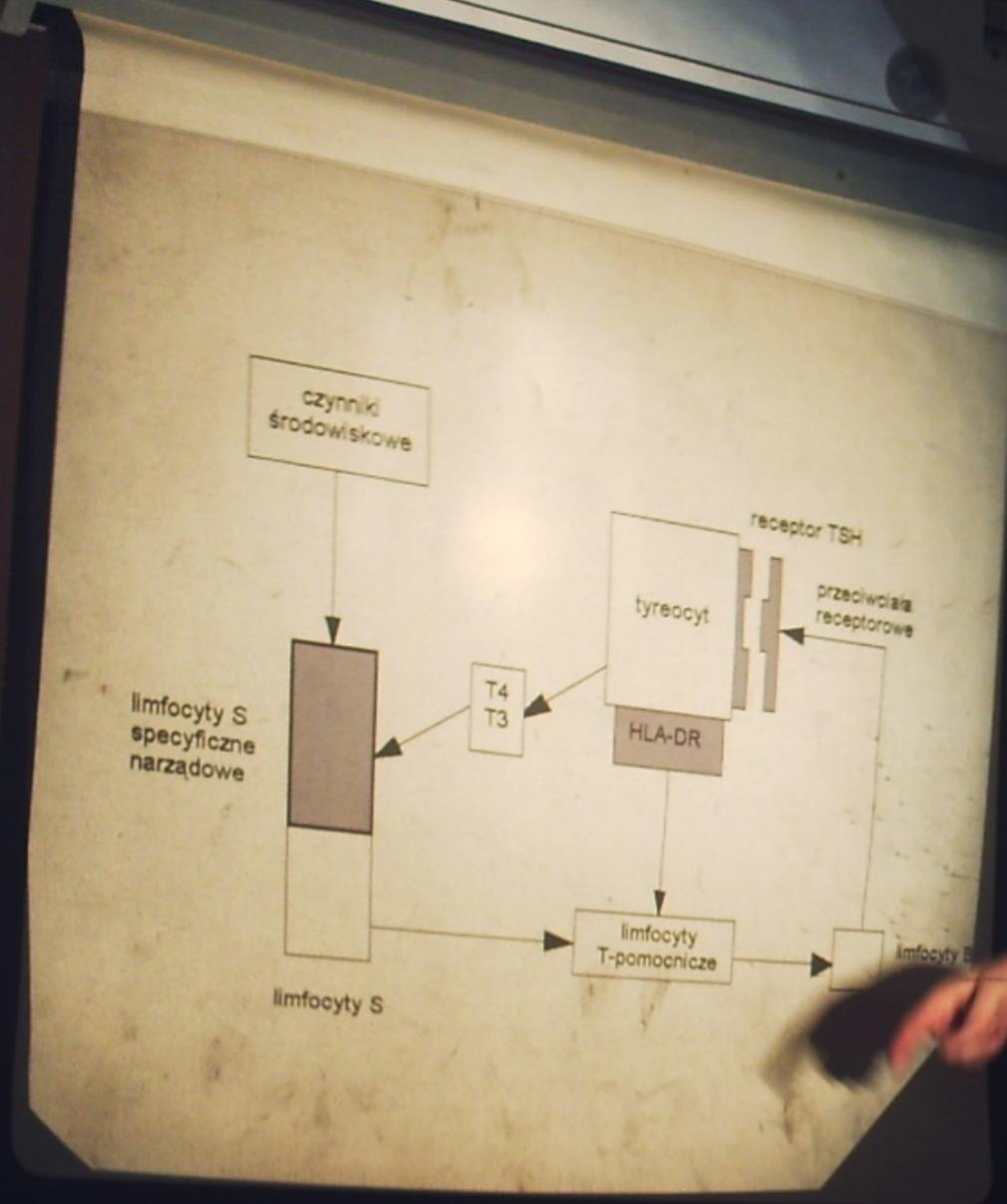
receptor TSH

przeciwciała  
receptorowe

limfocyty  
T-pomocnicze

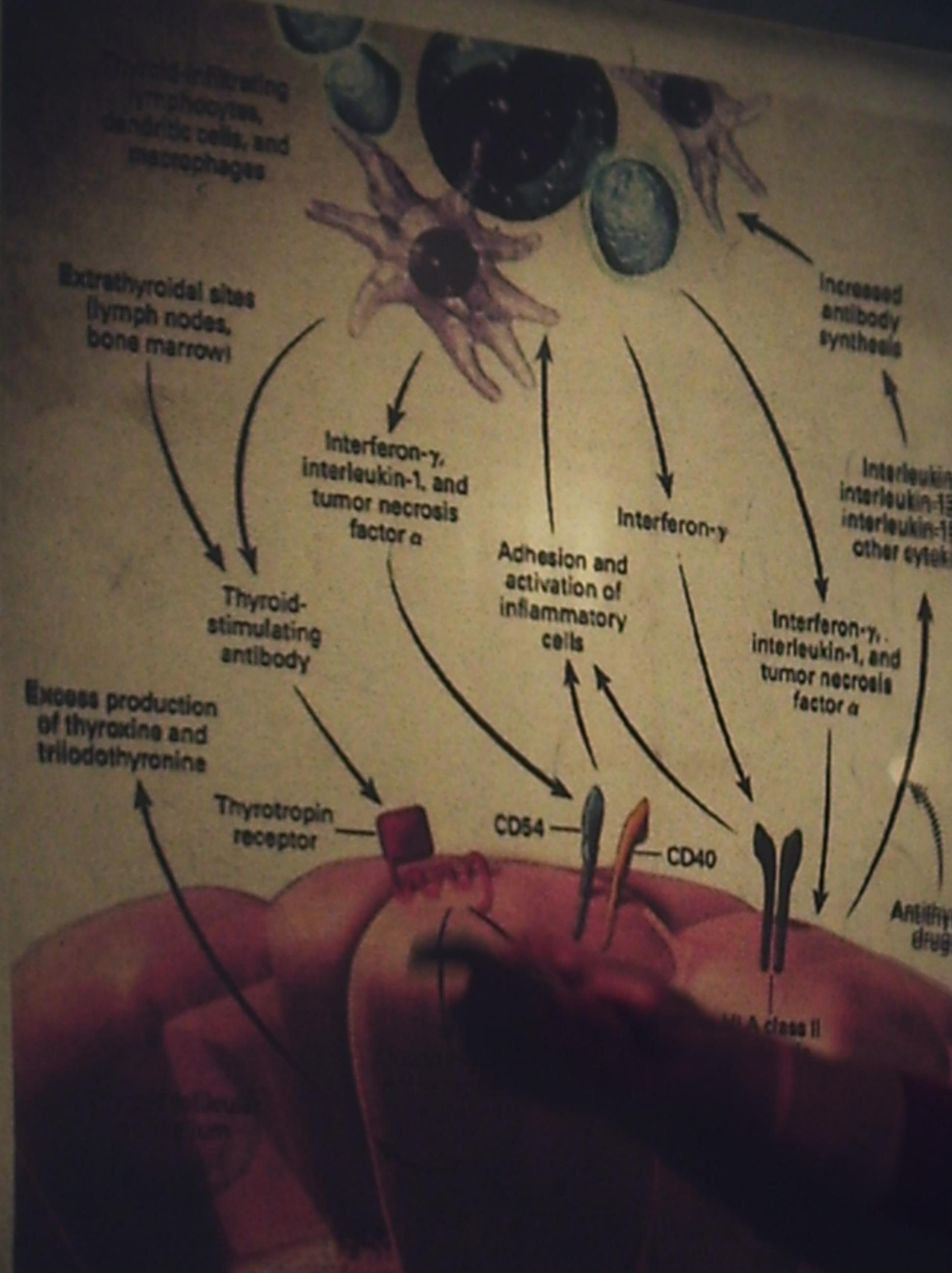
limfocyty B





INFORMACJE  
DLA  
STUDENTÓW





Thyroid-infiltrating lymphocytes, dendritic cells, and macrophages

Extrathyroidal sites (lymph nodes, bone marrow)

Increased antibody synthesis

Interferon- $\gamma$ , interleukin-1, and tumor necrosis factor  $\alpha$

Interferon- $\gamma$

Interleukin-6, interleukin-13, and interleukin-15 and other cytokines

Thyroid-stimulating antibody

Adhesion and activation of inflammatory cells

Interferon- $\gamma$ , interleukin-1, and tumor necrosis factor  $\alpha$

Excess production of thyroxine and triiodothyronine

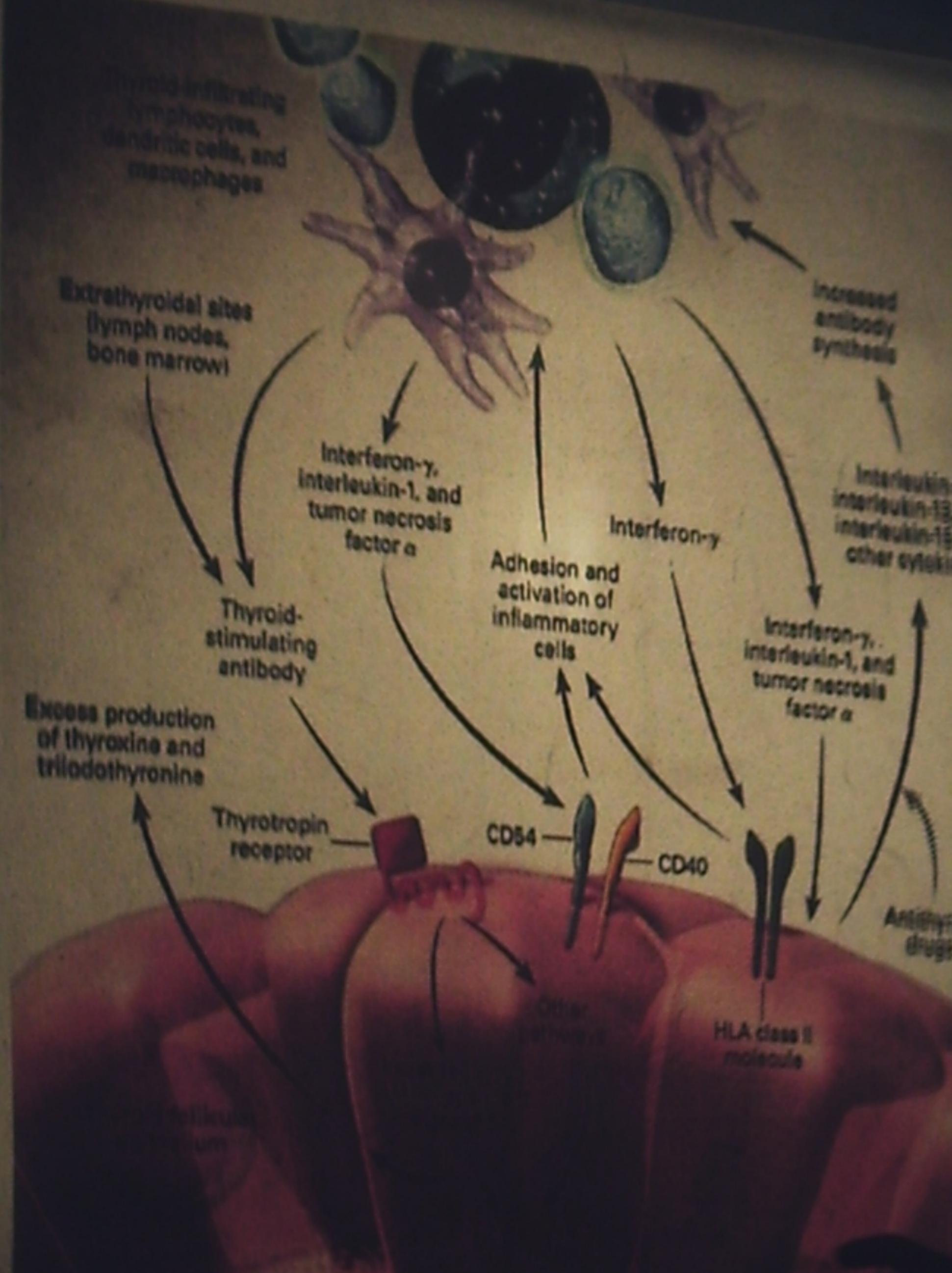
Thyrotropin receptor

CD54

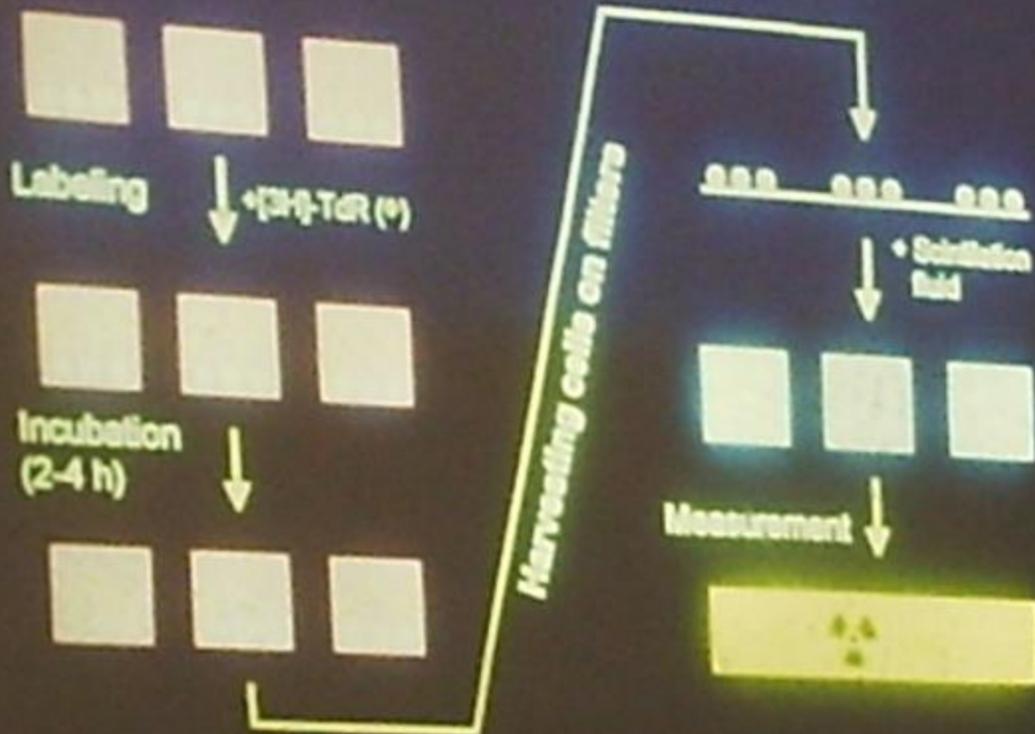
CD40

Antithyroid drug

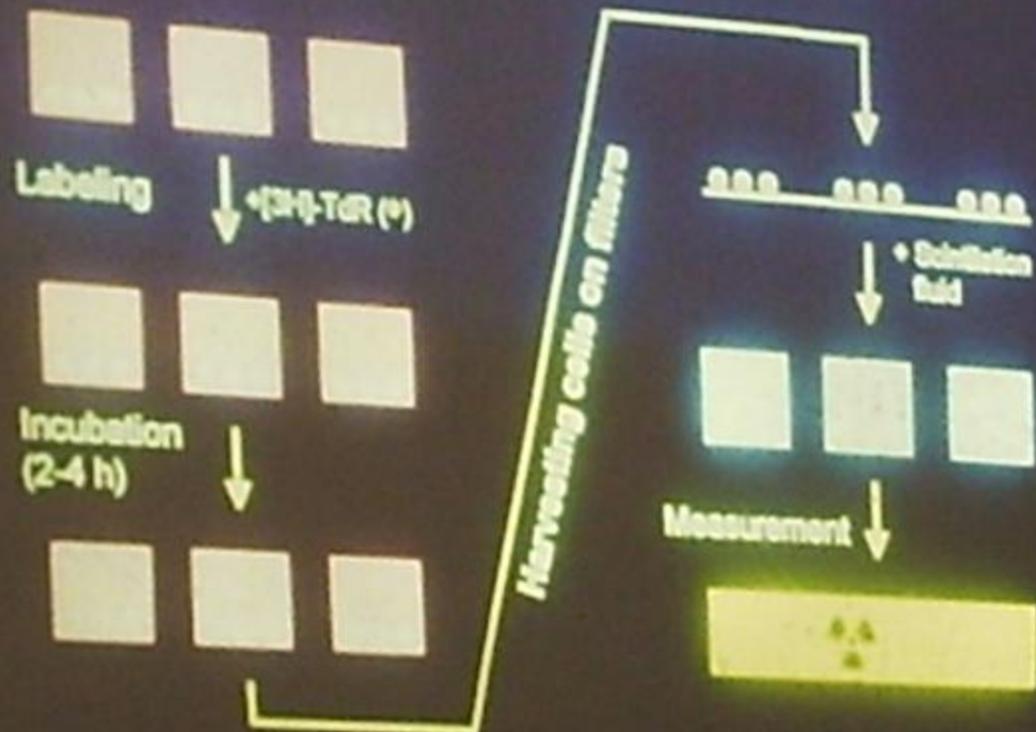
MHC class II



# [<sup>3</sup>H]-TdR incorporation assay

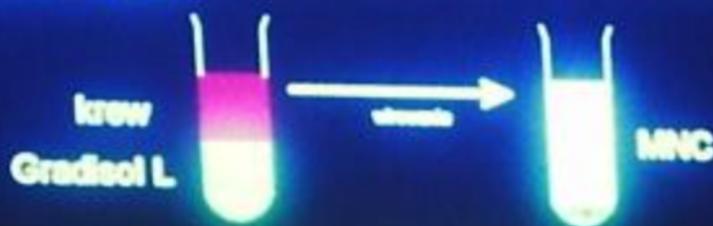


# [<sup>3</sup>H]-TdR incorporation assay



# Ocena aktywności komórek NK

- 1) izolacja komórek jednojądrzastych (MNC) z krwi przez wirowanie w gradiencie stężeń



- 2) przygotowanie komórek linii nowotworowej  $K_{562}$
- 3) inkubacja z D I O (3,3' - diocetadecyloxycarbocyanine perchlorate)  
Komórki  $K_{562}$  + limfocyty + jodek propidyny  
↓ wirowanie
- 4) inkubacja 4h w temp  $37^{\circ}\text{C}$  w atmosferze  $5\%\text{CO}_2$   
↓  
odczyt w cytofluorometrze przepływowym

**MONONUCLEAR CELLS**  
(recipient, donor, control)



$\gamma$  radiation (0)

R,D or C  
cells

a half of R,D or C cells

a half of R,D or C cells

# Culturing cells

	Rx	Dx	Cx	Cx
R	RRx	RDx	RC1x	RC2x
D	DRx	DDx	DC1x	DC2x
C1	C1Rx	C1Dx	C1C1x	C1C2x
C2	C2Rx	C2Dx	C2C1x	C2C2x

ISRDx < 1

ISDRx < 1

ISRDx > 1

ISDRx < 1

ISRDx < 1

ISDRx > 1

HLA-D Mismatch

Allograft rejection

Graft versus Host Disease (GVHD)

$$ISRDx = (RDx - RRx) / RRx$$

$$ISDRx = (DRx - DDx) / DDx$$

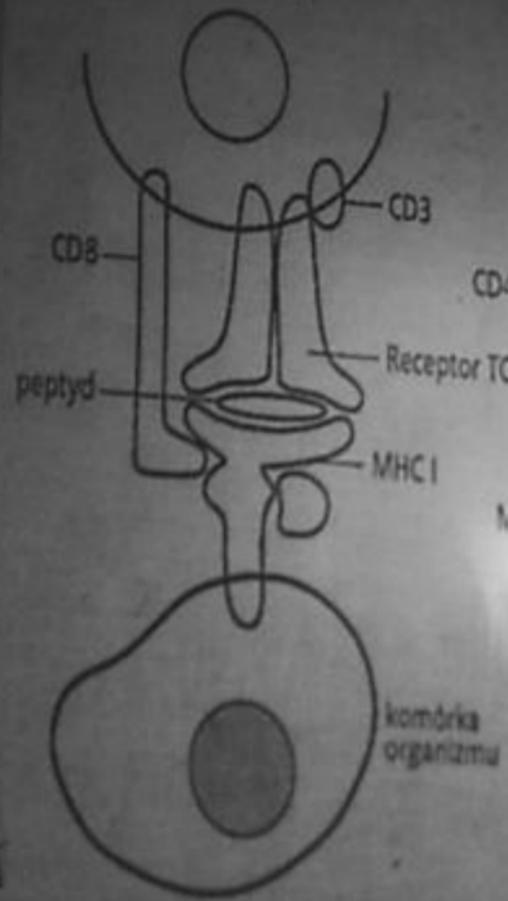
PHA - 10700 cpm (5220 -  
- 73124 cpm)

SAC - 500 cpm (837 - 6650 cpm)

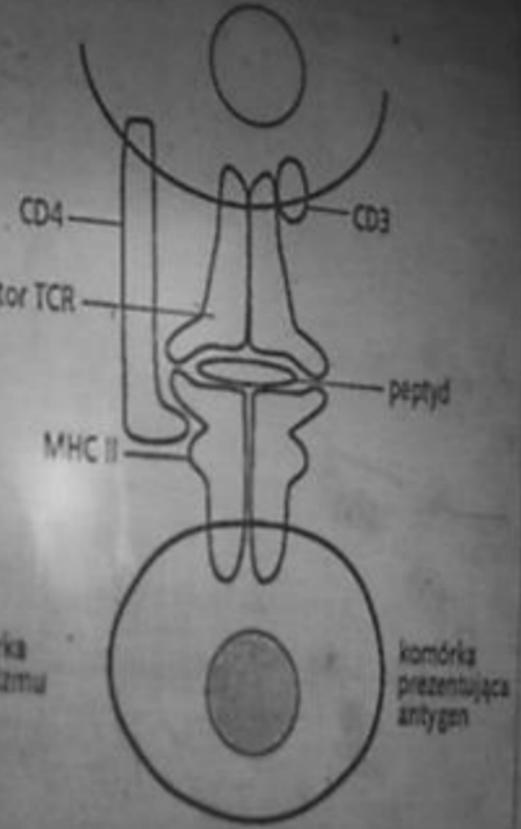
PAF - obnizone

+ K. cyt. c - 8.05  $\mu\text{mol O}_2^-$   
(7.34 - P.P)

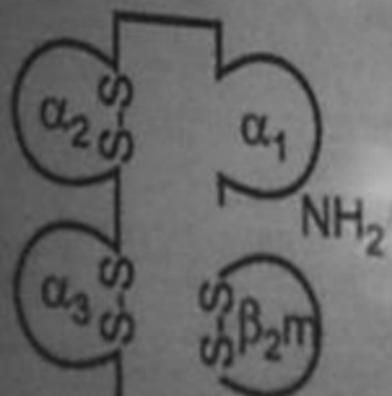
Limfocyt TCD8  
(cytotoxiczny)



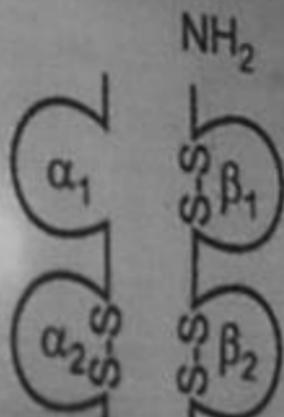
Limfocyt TCD4  
(pomocniczy)



cz. MHC  
klasa I

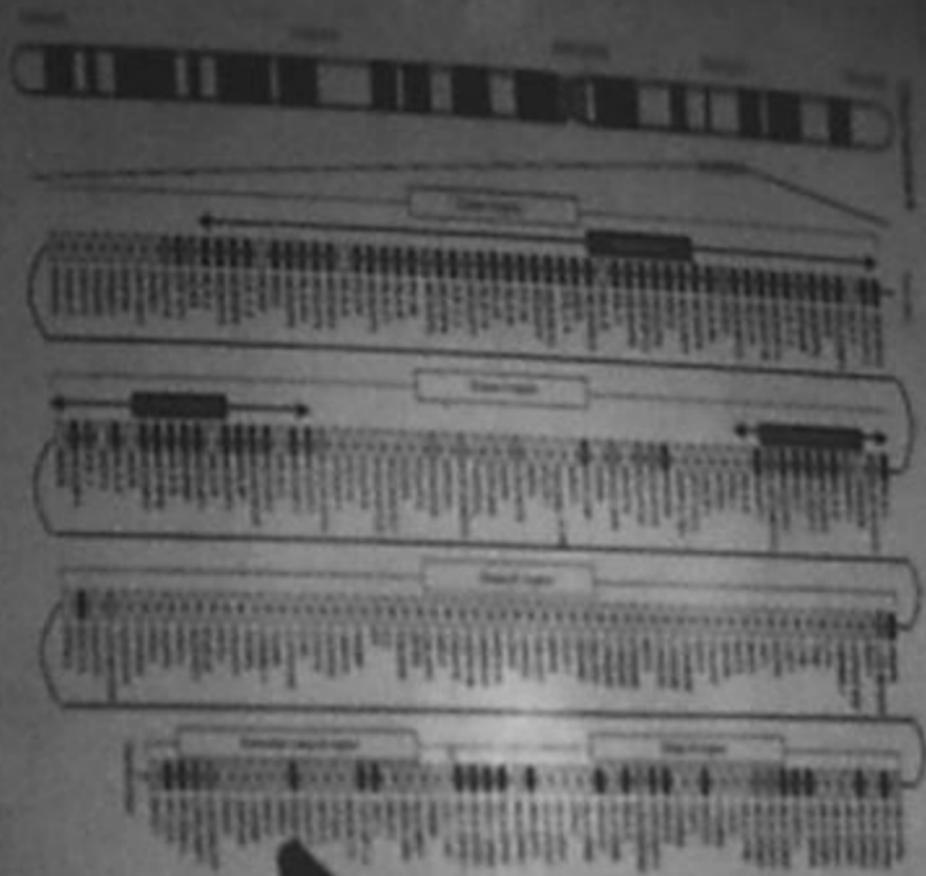


cz. MHC  
klasa II



COOH

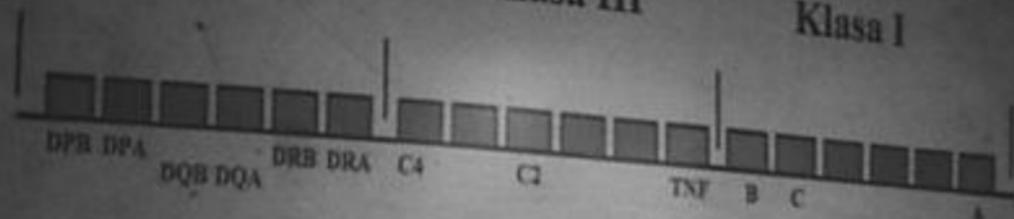
COOH



Klasa II

Klasa III

Klasa I

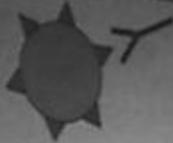
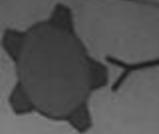


Główny kompleks zgodności tkankowej



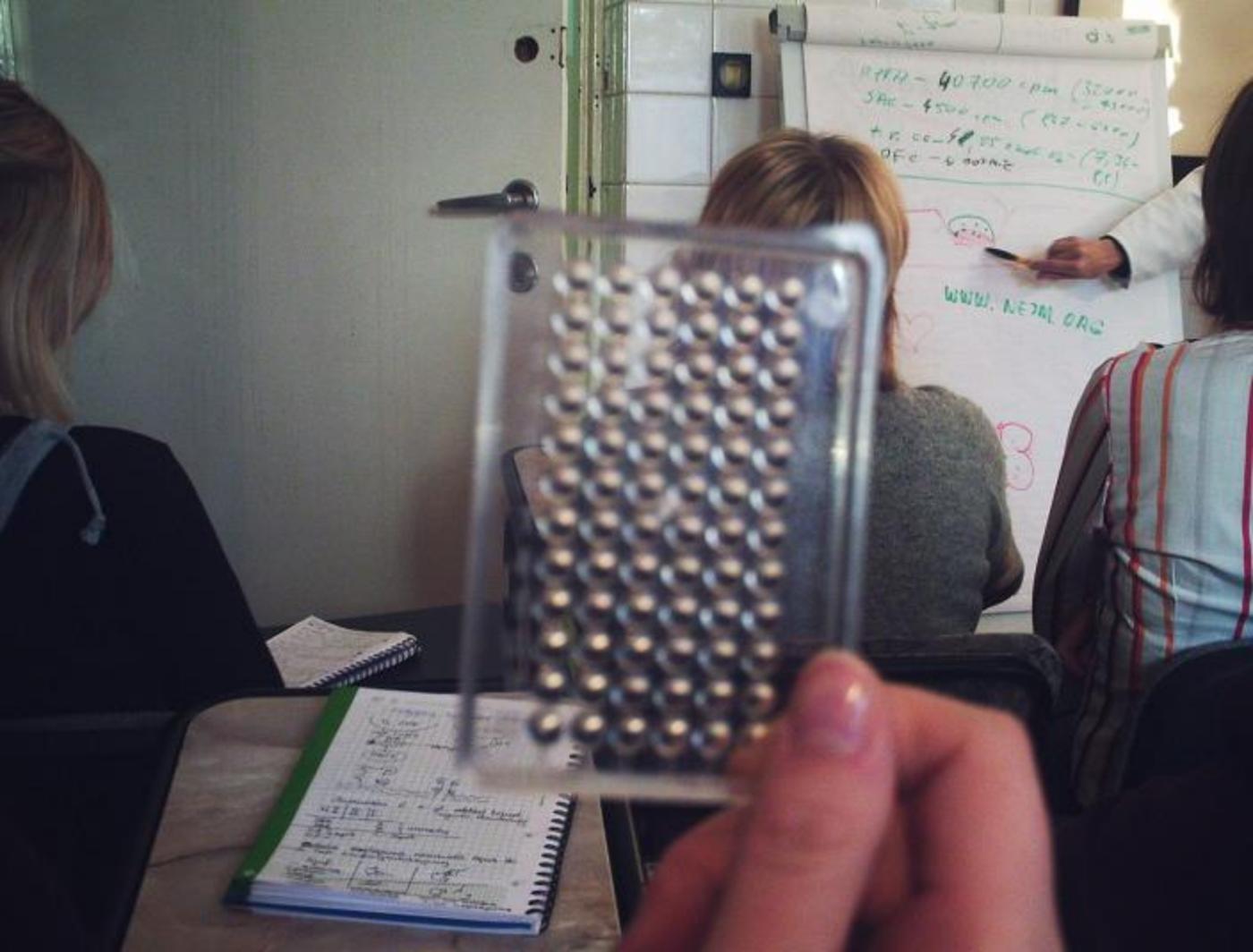


# Test limfocytotoksyczny

Limfocyty + surowica		
+ dopelniacz		
+ barwnik		

Reakcja  
pozytywna

Reakcja  
negatywna



PTA - 40700 rpm (30000 - 45000)  
SAC - 4500 rpm (4000 - 5000)  
+ 1000 rpm (1000 - 2000)  
OFC - 4000 rpm (3000 - 5000)

WWW.NEJM.ORG



3 x 72 WELL TRAY WITH PRE-COATED ANTI-HLA-ABC REAGENTS  
 For use in the microlymphocytotoxicity test (see directions) - Subject to change

4K9010  
 9.06.04

Handwritten: A 2, 10/25 B 4, 18  
 Lab tags: G66, - Bx 6, -

Test Date

ROW	W10						W20						W30						W40						W50						W60																		
	A	B	C	D	E	F	F	E	D	C	B	A	A	A	B	C	D	E	F	F	E	D	C	B	A	A	A	B	C	D	E	F	F	E	D	C	B	A											
REACTOR	4						4	4	4	4										4	4																												
HLA-ABC REAGENTS	HLA-A2	HLA-A2	HLA-A1	HLA-A1	HLA-A1	HLA-A1	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A1	HLA-A1	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	
CLONED																																																	

ROW	W70						W80						W90						W100						W110						W120																						
	A	B	C	D	E	F	F	E	D	C	B	A	A	A	B	C	D	E	F	F	E	D	C	B	A	A	A	B	C	D	E	F	F	E	D	C	B	A															
REACTOR	5	4																																																			
HLA-ABC REAGENTS	HLA-A2	HLA-A2	HLA-A1	HLA-A1	HLA-A1	HLA-A1	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A1	HLA-A1	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2	HLA-A2					
CLONED																																																					

- Codes
- 4+ = weak HLA-A2
  - 4- = weak HLA-B1
  - 40 = weak HLA-C1
  - 41 = Control
  - 42 = unknown
  - 43 = nonreactive (negative)
  - 44 = unknown

Order  
 HLA class II reagents  
 (mg) - 200/250/300  
 Cat No. 600-04  
 Lot No. 100-010  
 Exp Date 2002-01-01

See also table  
 100-010  
 100-011  
 100-012  
 100-013  
 100-014  
 100-015  
 100-016  
 100-017  
 100-018  
 100-019  
 100-020  
 100-021  
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 100-024  
 100-025  
 100-026  
 100-027  
 100-028  
 100-029  
 100-030