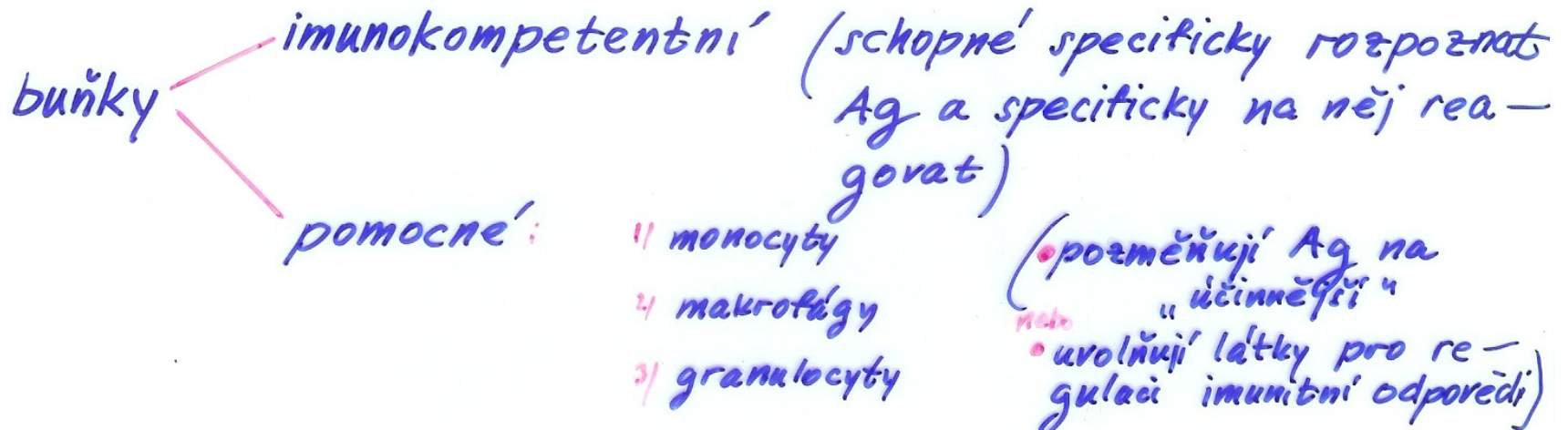
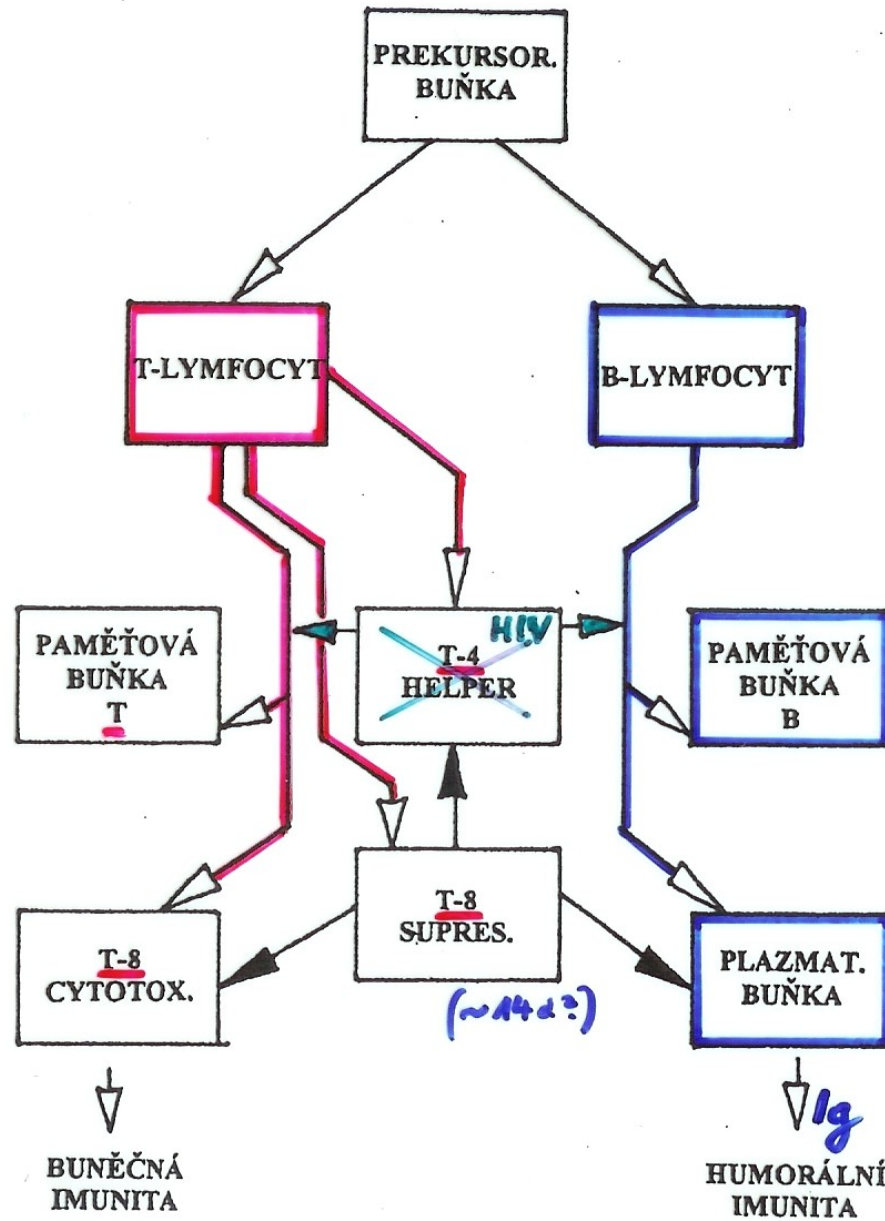


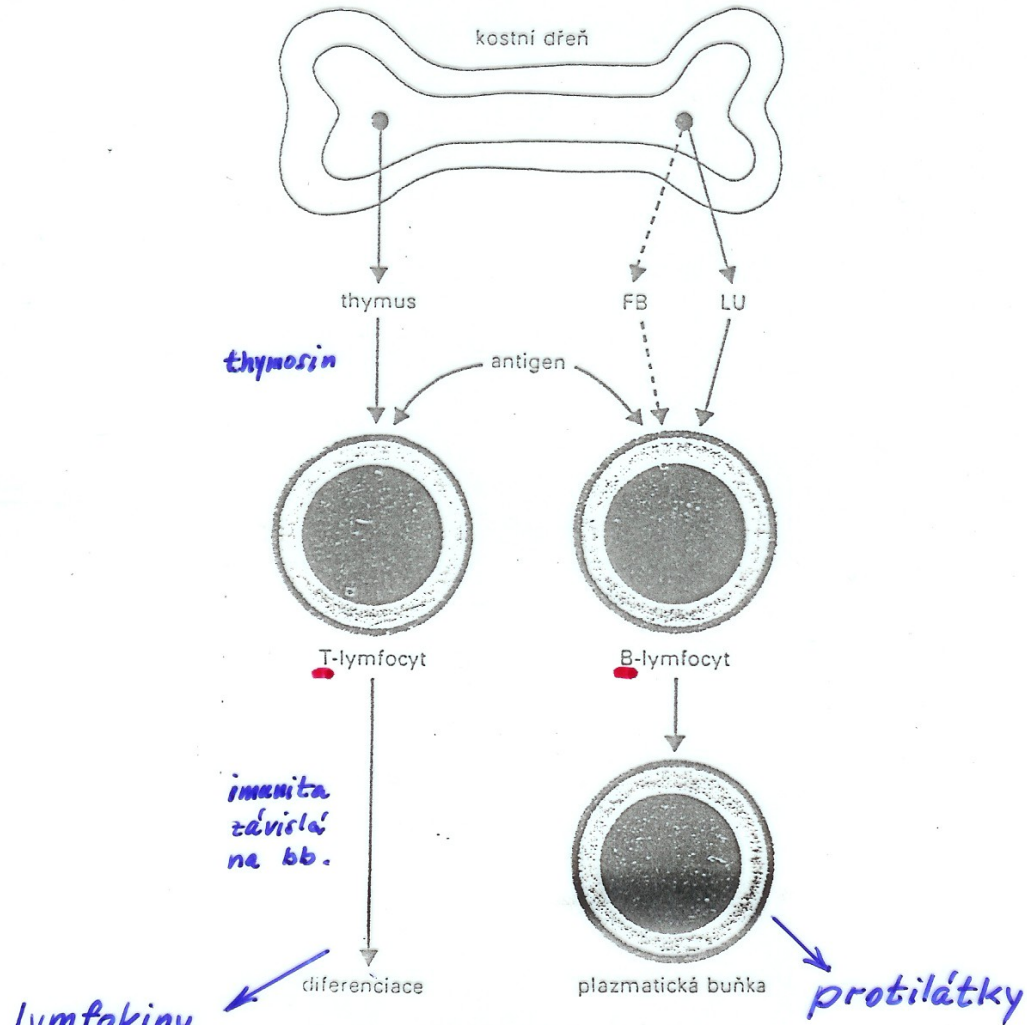


# IMMUNO

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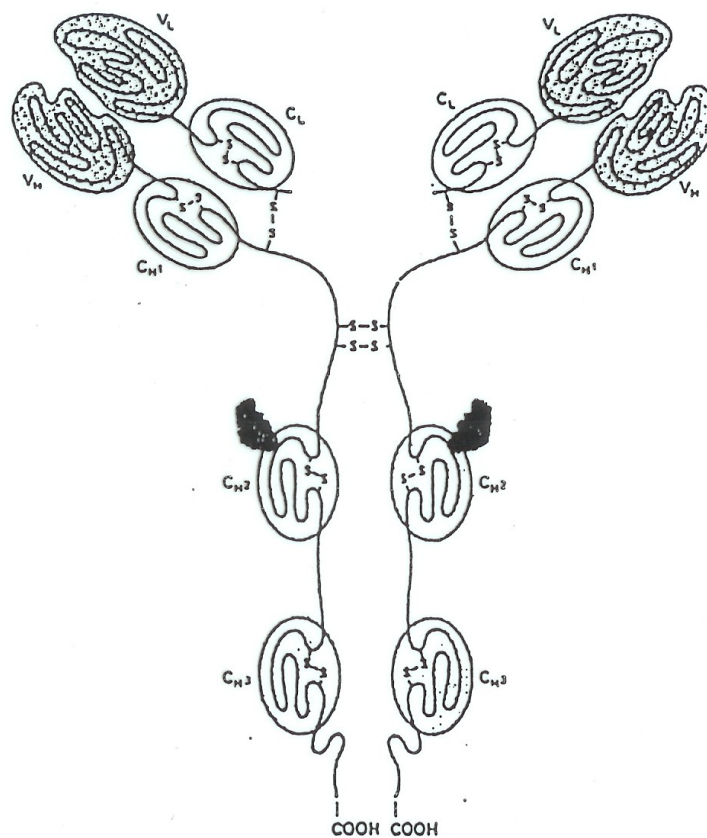


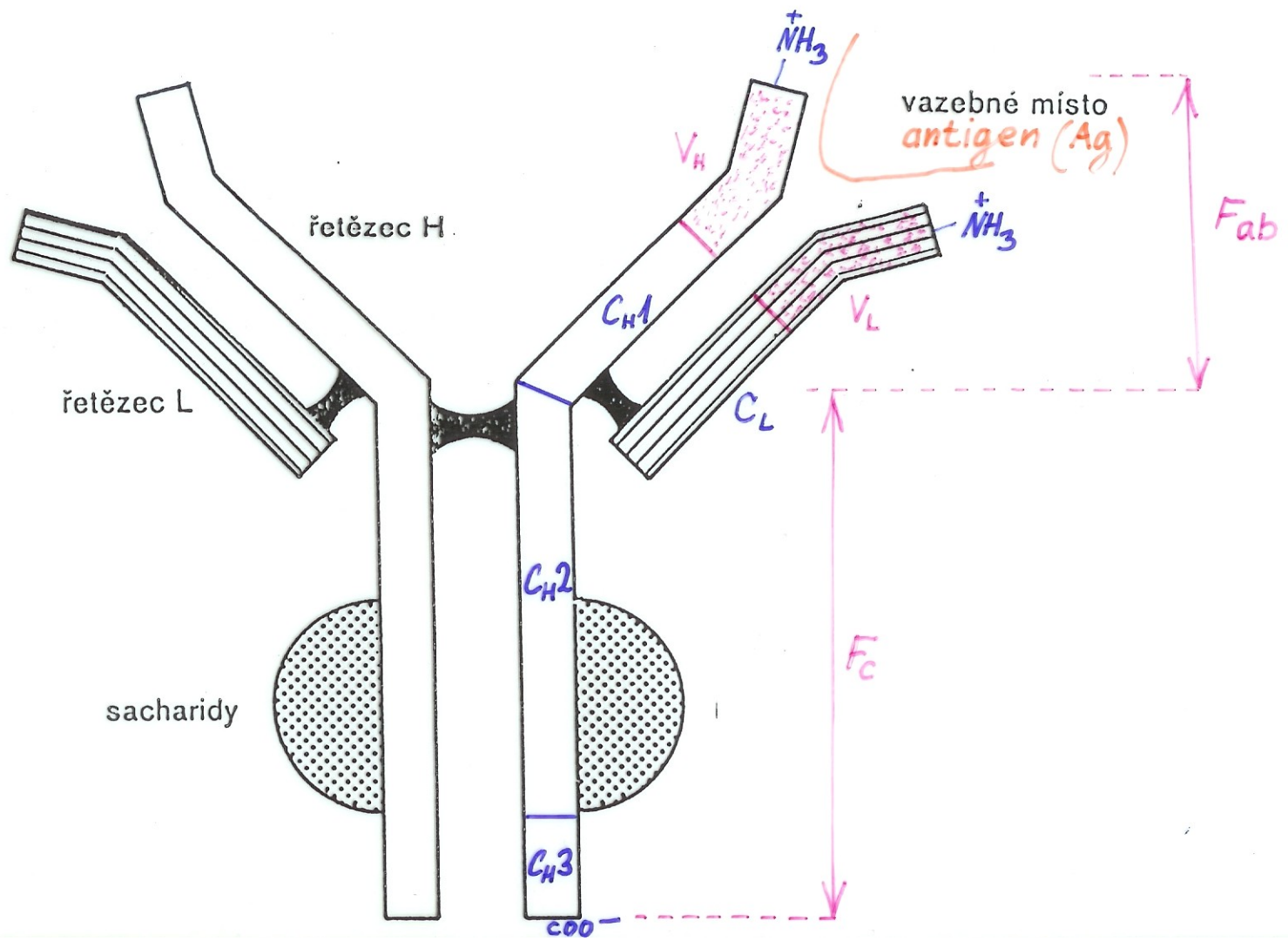
Původ lymfocytů T a B a jejich další osud. FB = Fabriciova burza u ptáků, LU = dosud neidentifikovaná centra lymfatických uzlin u savců

" B-lymfo → Ab "

Struktura imunoglobulinu (IgG nebo sérový IgA)

Structure of Immunoglobulin (IgG or Serum IgA)





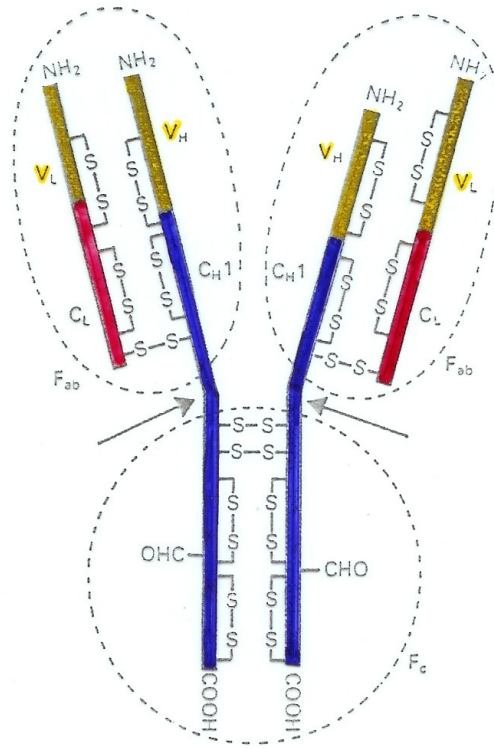
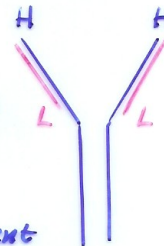


Schéma struktury IgG s vyznačením disulfidových vazeb v řetězcích i mezi nimi, vazby sacharidového podílu (-CHO) a vyznačení místa štěpení molekuly papainem (šipky) a fragmenty  $F_c$  a  $F_{ab}$ . Tmavě jsou označeny variabilní oblasti (V), zbytek jsou oblasti konstantní (C)

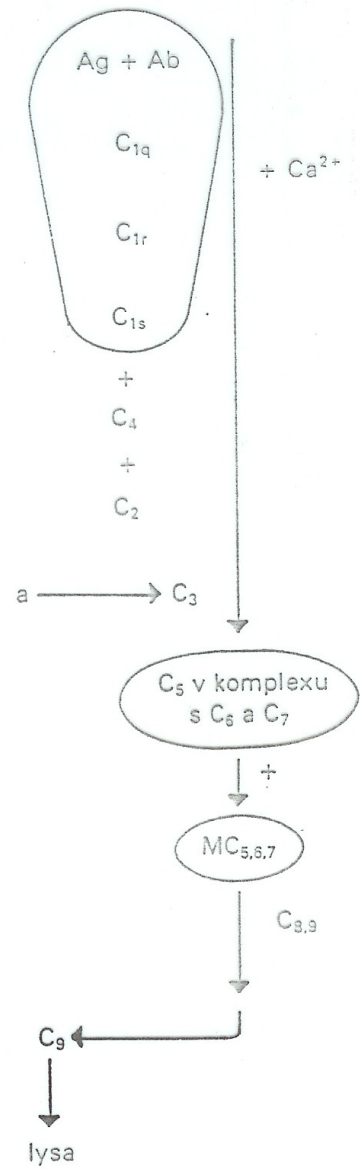
heavy (z angl.) = těžký ~ 440 AA  
 light (z angl.) = lehký ~ 220 AA



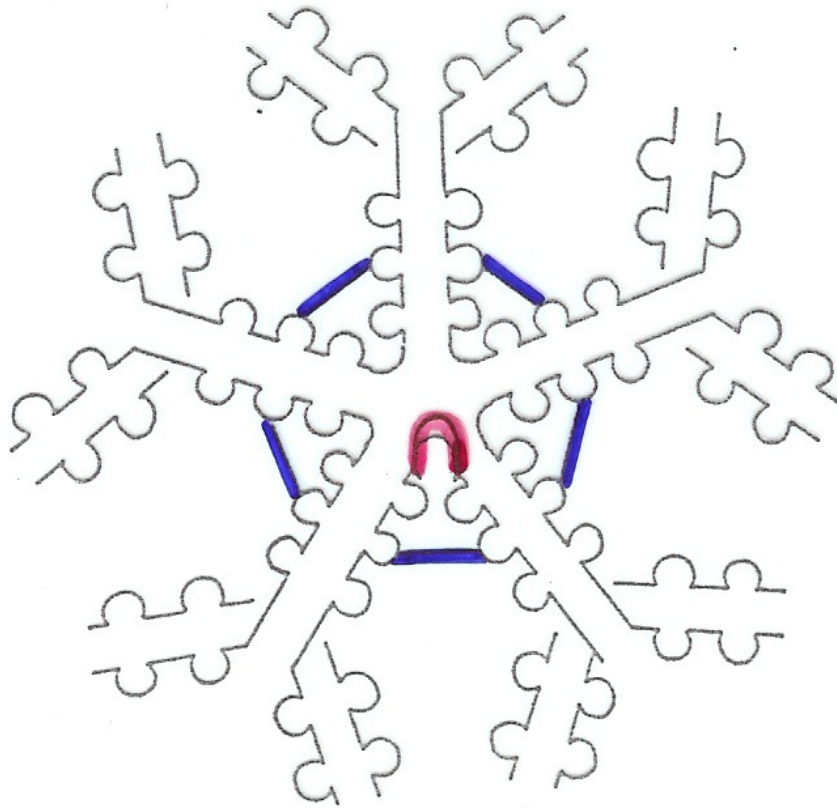
$M_r \sim 50.000$   
 $M_r \sim 25.000$

antigen binding fragment / complement





„Klasická“ dráha aktivace složek komplementu (silně zjednodušeno); a = alternativní dráha aktivace.

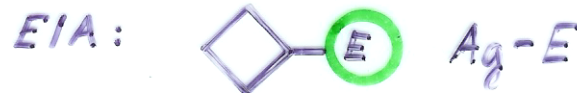


Struktura imunoglobulinu  
M. Červeně: J-řetězce, modře: dodatečné disulfidové vazby

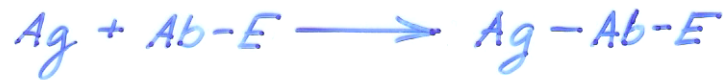
*IgM*

# EIA = enzymová imunoanalýza

enzyme immuno-assay  
<enzaim ,imju:nəu 'asei>



## 1) homogenní EIA



vazbou změna aktivity E

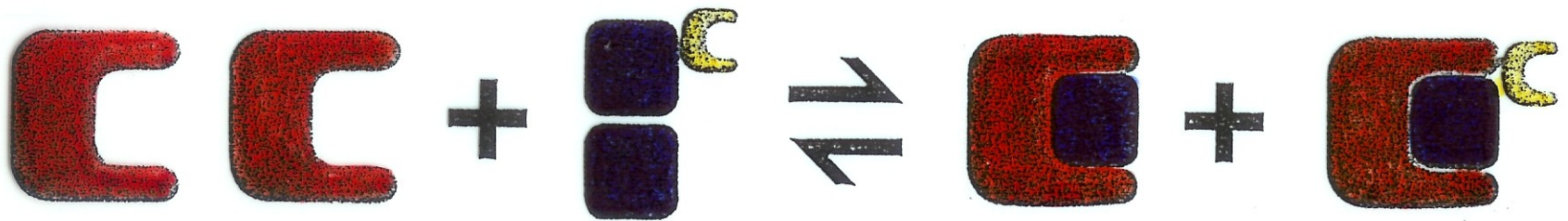
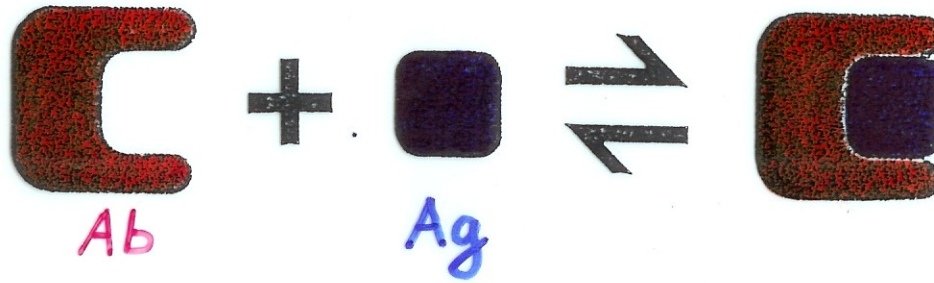
např. EMIT = enzyme multiplied immunoassay technique  
<enzaim multiplaid ,imju:nəu 'asei  
(rozmněšeny sňásobery) tekni:k>

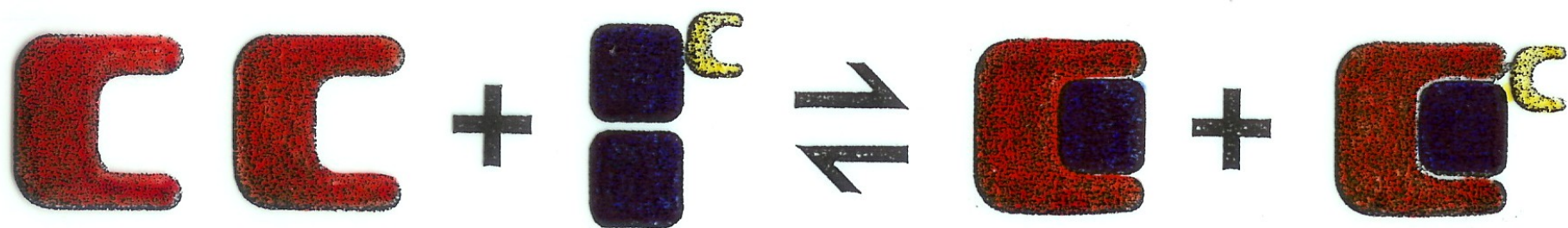
## 2) heterogenní EIA

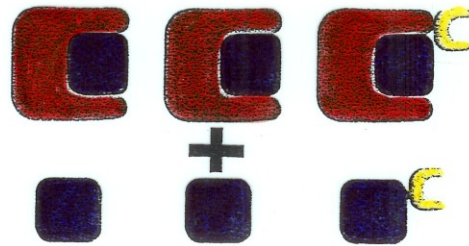
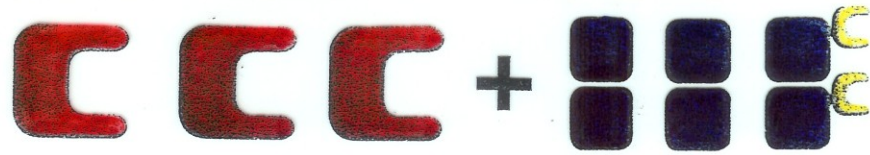
např. ELISA = enzyme-linked immunosorbent assay  
<enzaim linkt i'mju:nəu'so:bənt 'asei>  
(vazany)

# EIA

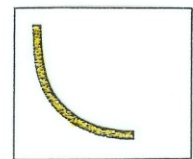
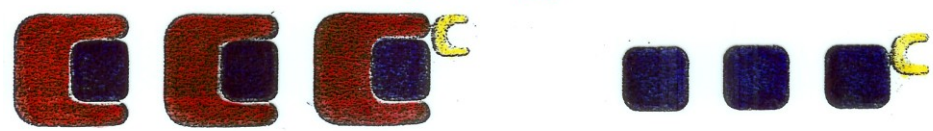
(ENZYM IMMUNASSAY)







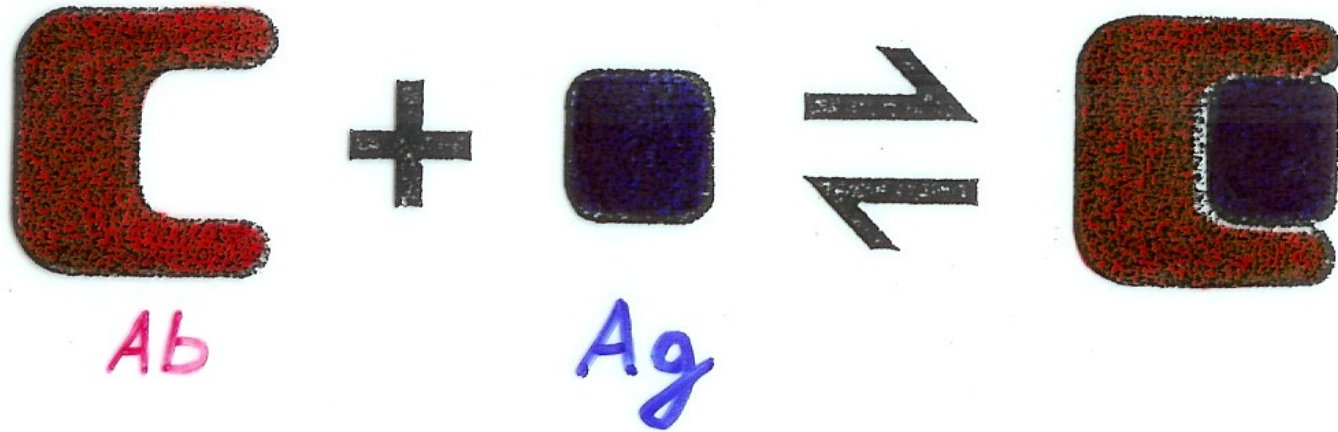
ODDĚLENÍ VÁZANÝCH  
 A VOLNÝCH Ag  
 → „heterogenní“ analýza



**Patient Report**  
 Name: Karel Konečný  
 Number: 123456  
 Ward: Interní odd.  
 Physician: MUDr. Jan Novák  
 Date: 15. 10. 2023

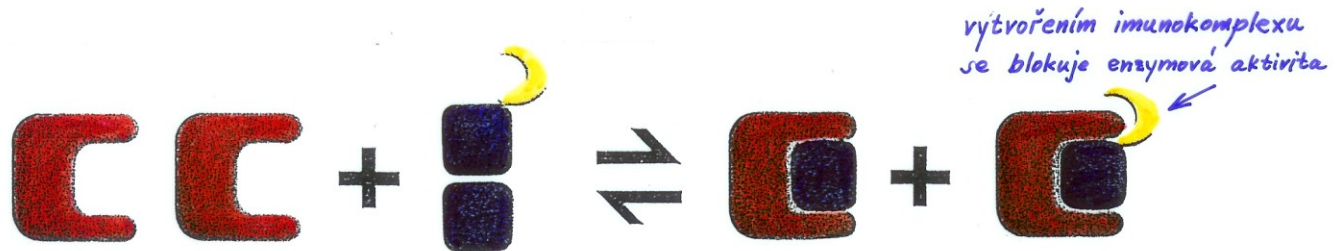
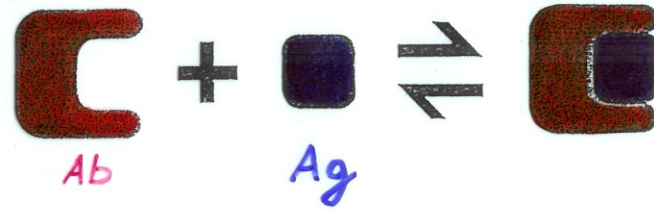
# EMIT<sup>®</sup>

<sup>®</sup> - Registered Trade Mark of Syva Corporation Inc, USA.

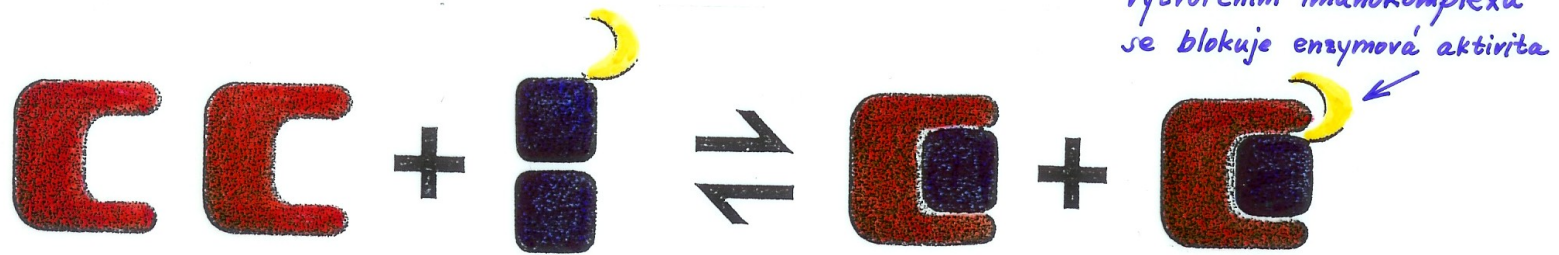


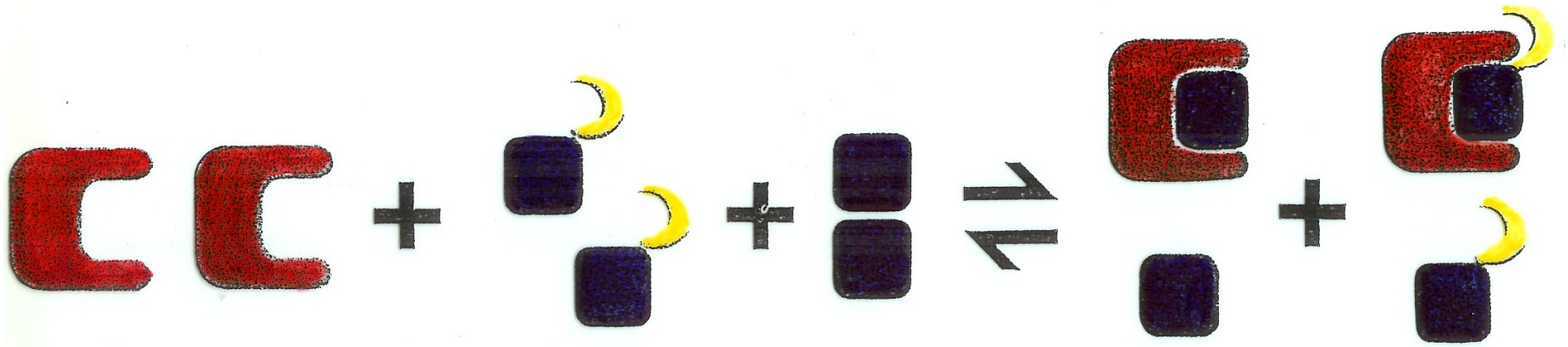
# EMIT<sup>®</sup>

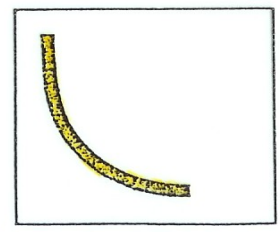
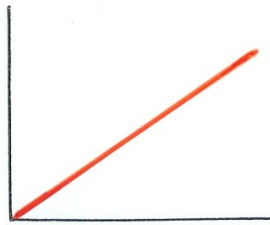
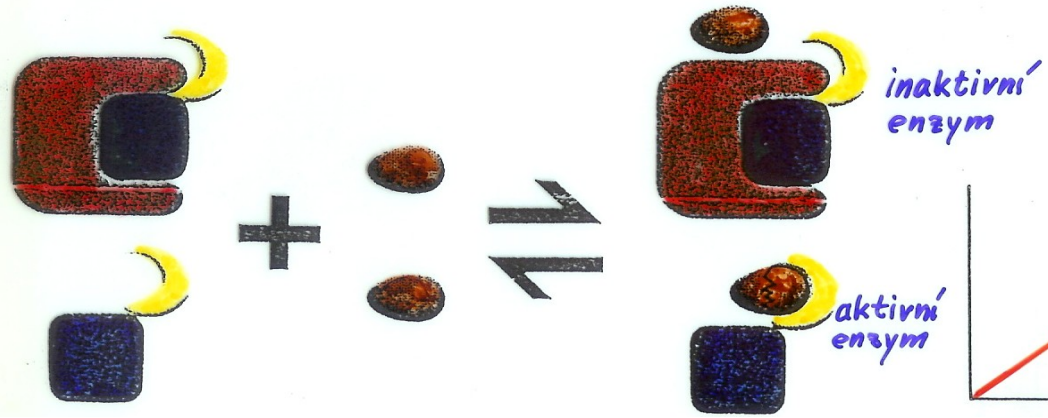
® - Registered Trade Mark of Syva Corporation Inc, USA.







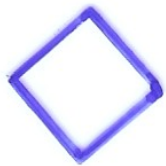
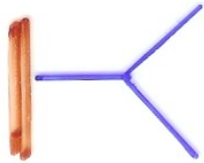




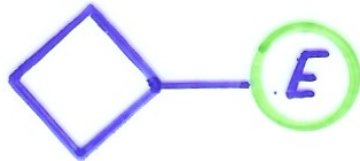
**Patient Report**

Name: *Karel Kuchera*  
 Number: *123456*  
 Ward: *Internal 101*  
 Physician: *Dr. J. Kucera*  
 Date: *10.10.2023*

## přímá kompetitivní ELISA

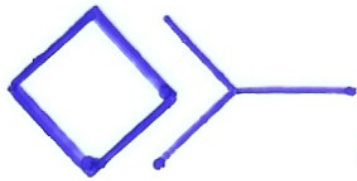
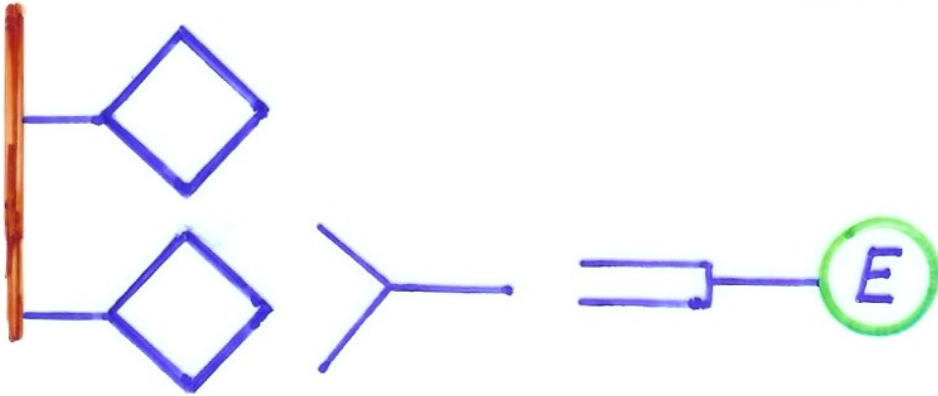


Ag = ?



$\uparrow [Ag] \rightarrow \downarrow E \text{ signal}$

## neřímá kompetitivní ELISA

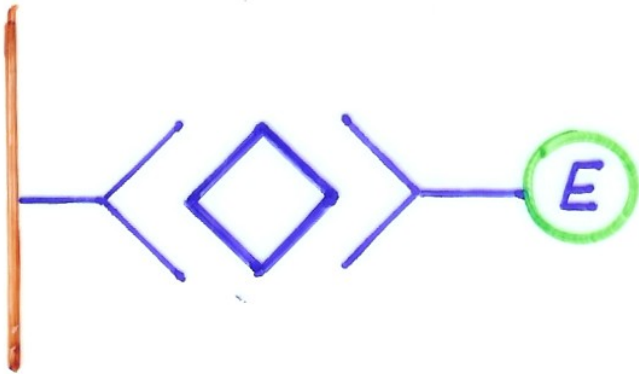


$Ag = ?$



vyplácha se

$\uparrow [Ag] \rightarrow \downarrow E\text{-signal}$



přímá nekompetitivní ELISA  
(sendvič)

Ag = ?

$\uparrow [Ag] \rightarrow \uparrow E\text{-signál}$

