

Vybrané podklady pro praktika z imunologie

Aglutinace

Precipitační reakce

Immunoblotting (Western blotting)

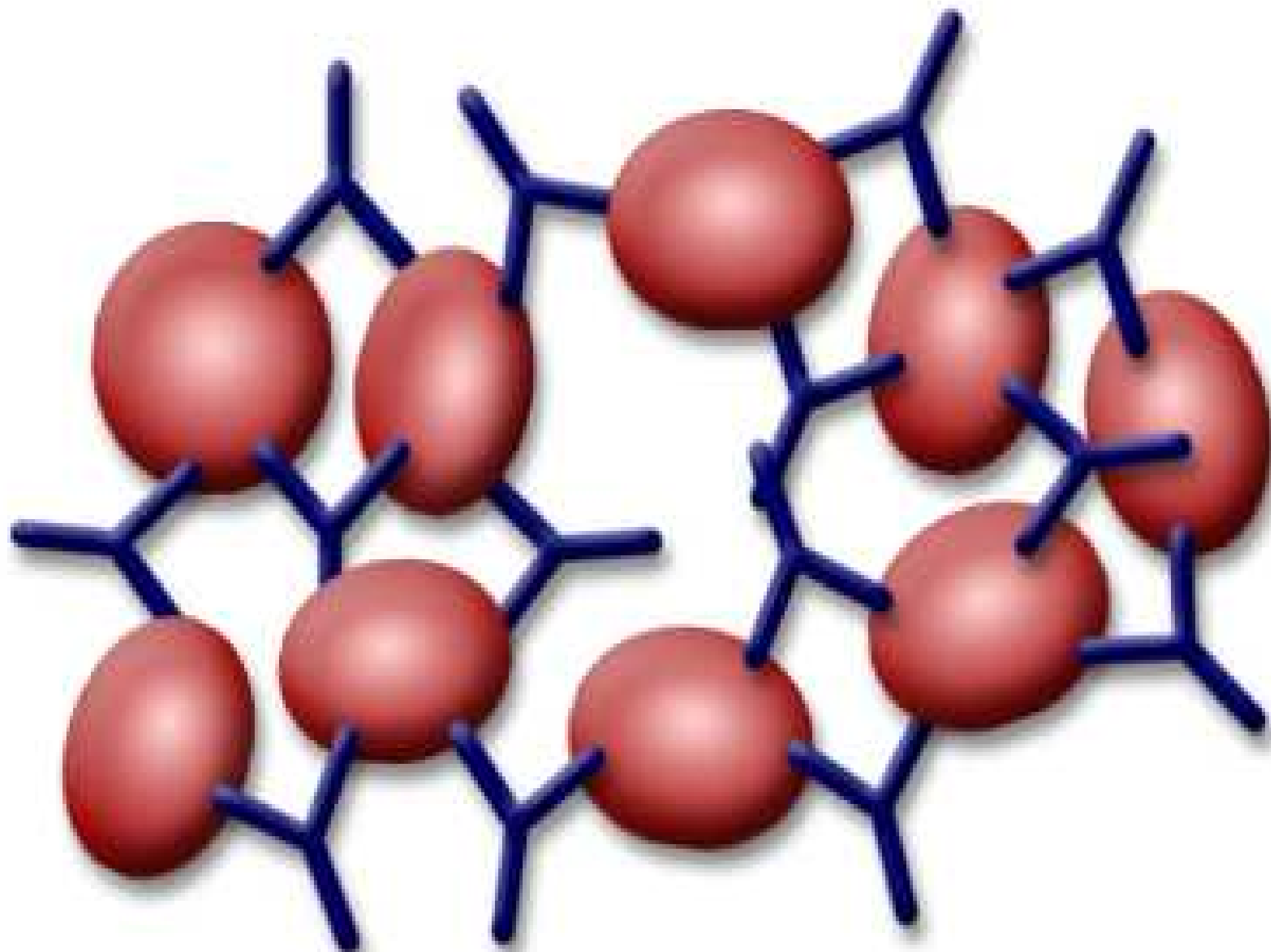
Imunoeseje








V. Thon, J. Litzman, J. Lokaj

Ústav klinické imunologie a alergologie

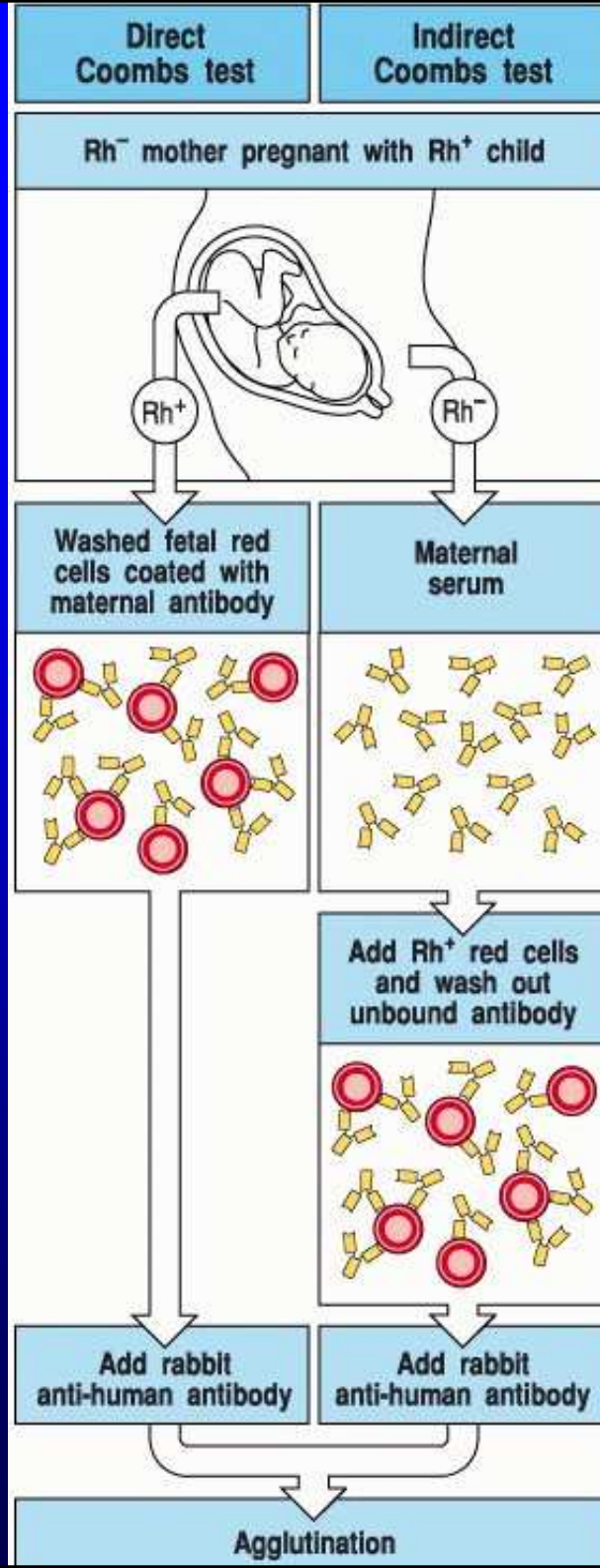
FN u sv. Anny v Brně

Aglutinace

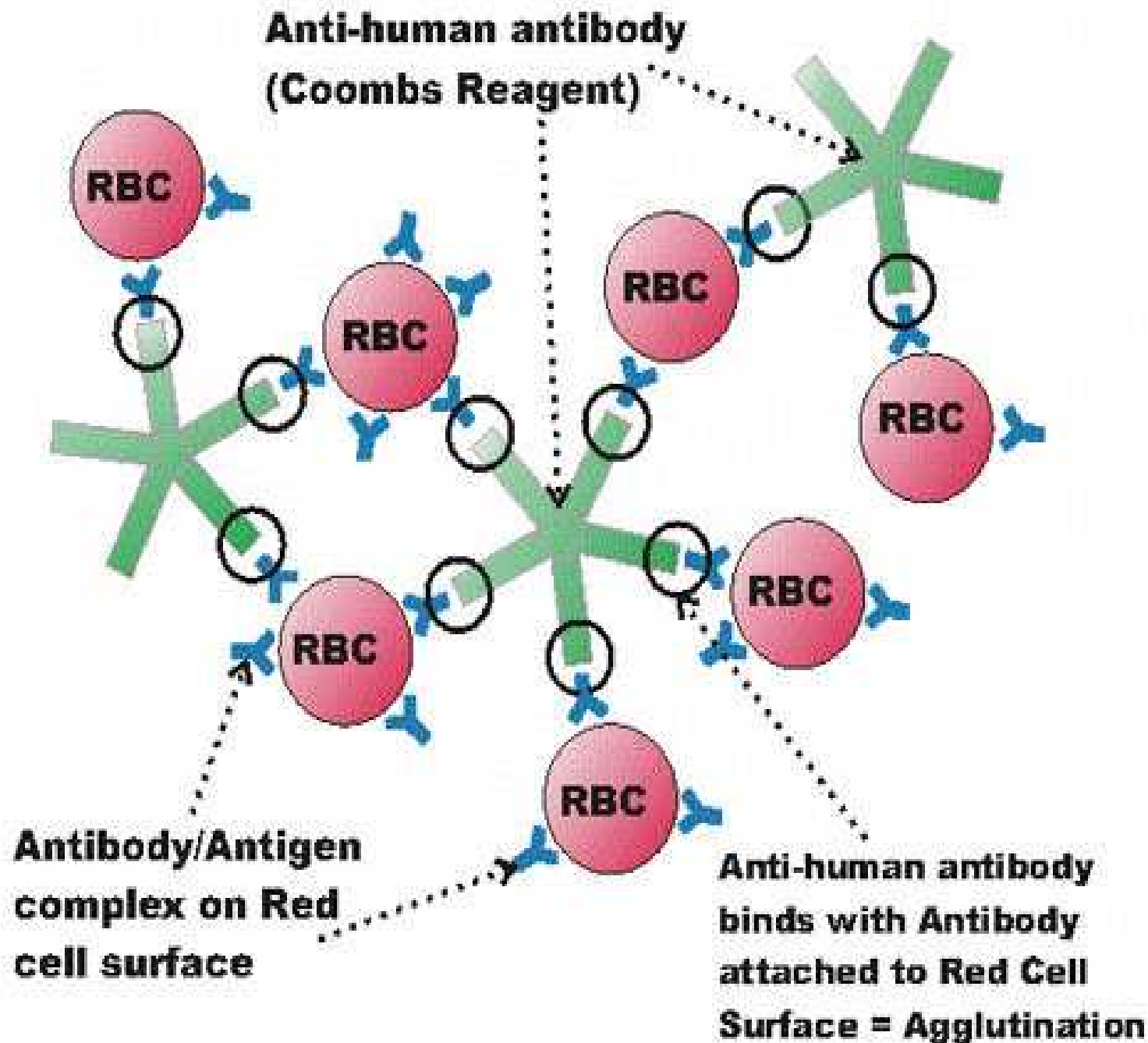


| | | Red blood cells from individuals of type | | | |
|---|--|---|---|---|---|
| | |  |  |  |  |
| | | Express the carbohydrate structures | | | |
| Serum from individuals of type | | GlcNAc - Gal - GalNAc Fuc | GlcNAc - Gal - Gal Fuc | GlcNAc - Gal Fuc | GlcNAc - Gal - GalNAc Fuc + GlcNAc - Gal - Gal Fuc |
|  Anti-B antibodies | | no agglutination | agglutination | no agglutination | agglutination |
|  Anti-A antibodies | | agglutination | no agglutination | no agglutination | agglutination |
|  Anti-A and anti-B antibodies | | agglutination | agglutination | no agglutination | agglutination |
| AB No antibodies to A or B | | no agglutination | no agglutination | no agglutination | no agglutination |

Coombs test



POSITIVE DIRECT COOMBS TEST



Latex-fixační test

- k průkazu revmatoidního faktoru

**Revmatoidní faktor (RF)
je autoprotilátka
namířená proti Fc části
IgG molekuly**

Revmatoidní faktor(y)

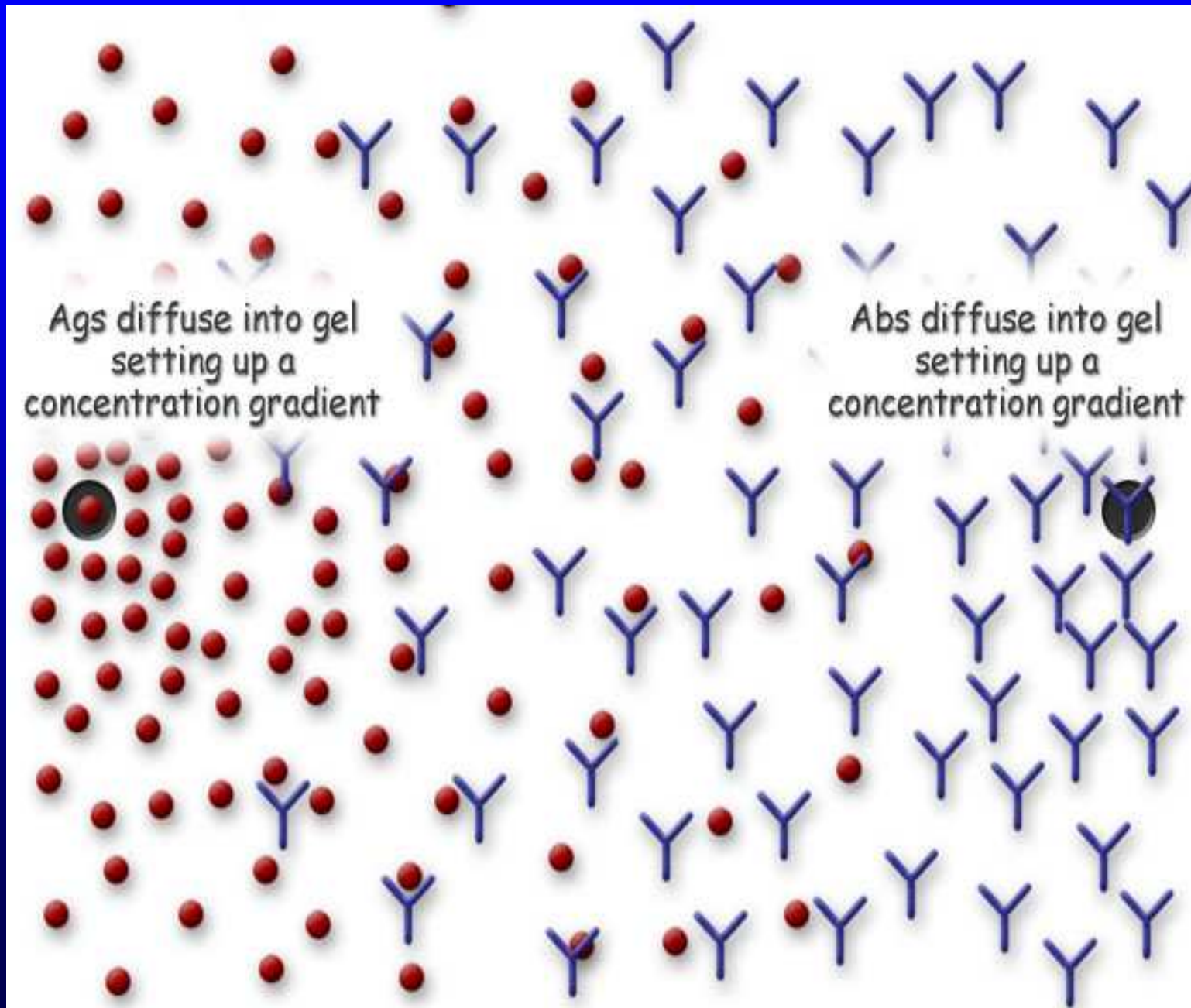
- Autoprotilátka proti Fc fragmentu molekuly IgG.
- Přítomen asi u 80% pacientů s revmatoidní artritidou.
- Pozitivní je též u asi 5-10% nemocných s jinými systémovými autoimunitními chorobami, autoimunitní hepatitidy, endocarditis lenta.
- Může být pozitivní i u zdravých osob.
- Diagnosticky nejdůležitější je RF ve třídě IgM.



Precipitační reakce



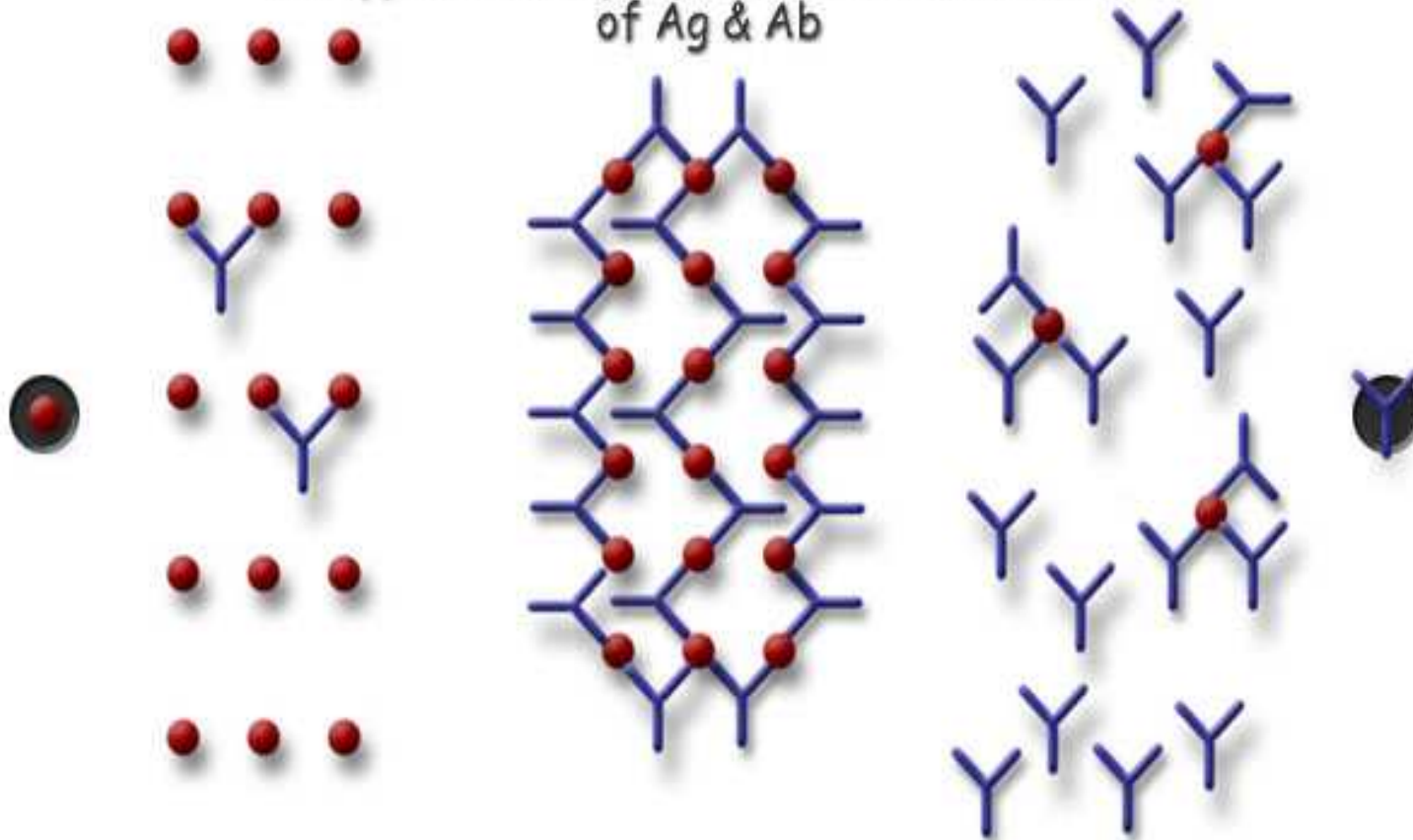
Vstříčná imunodifuze - I



Vstříčná imunodifuze - II

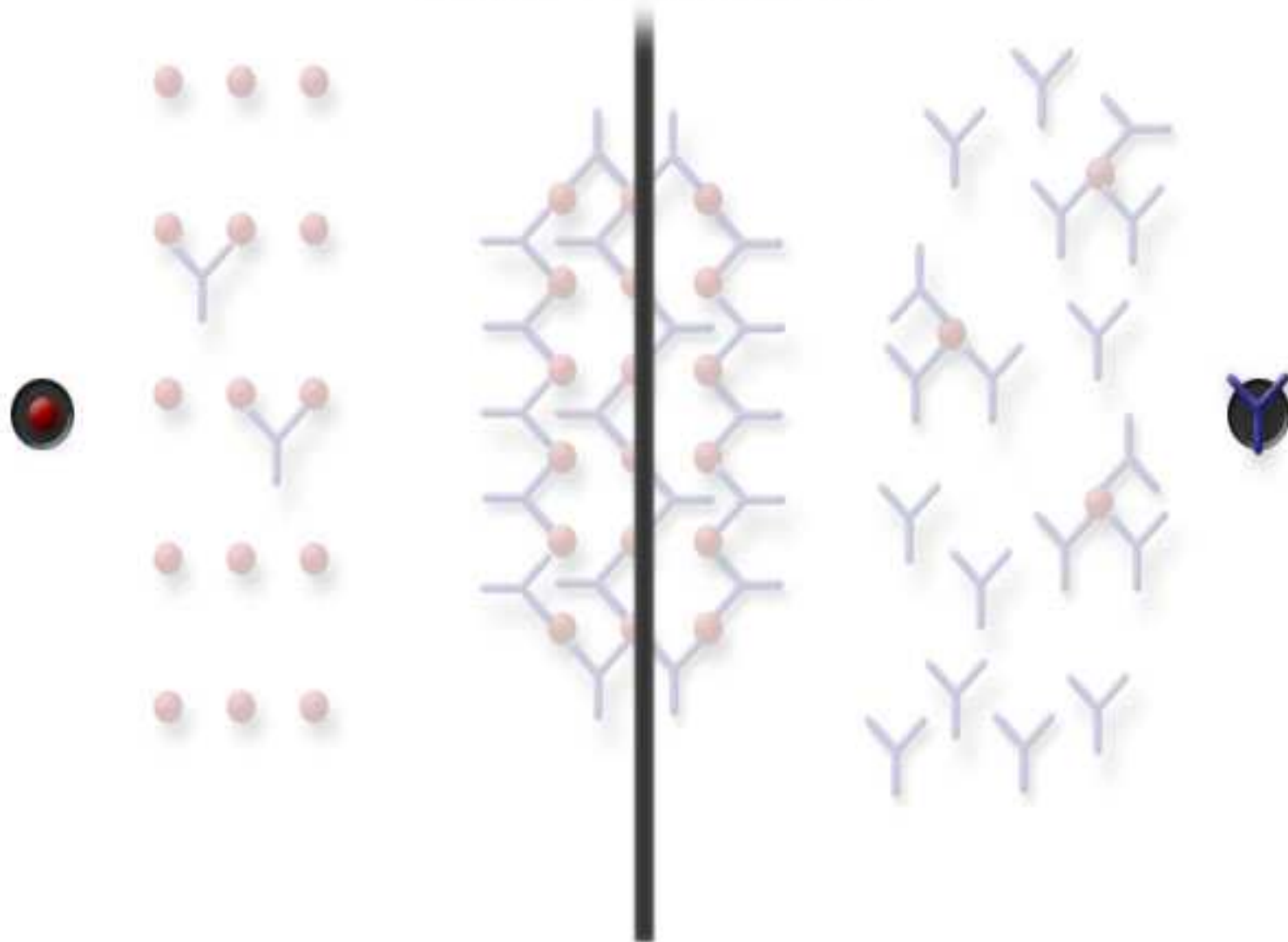
Ags & Abs combine

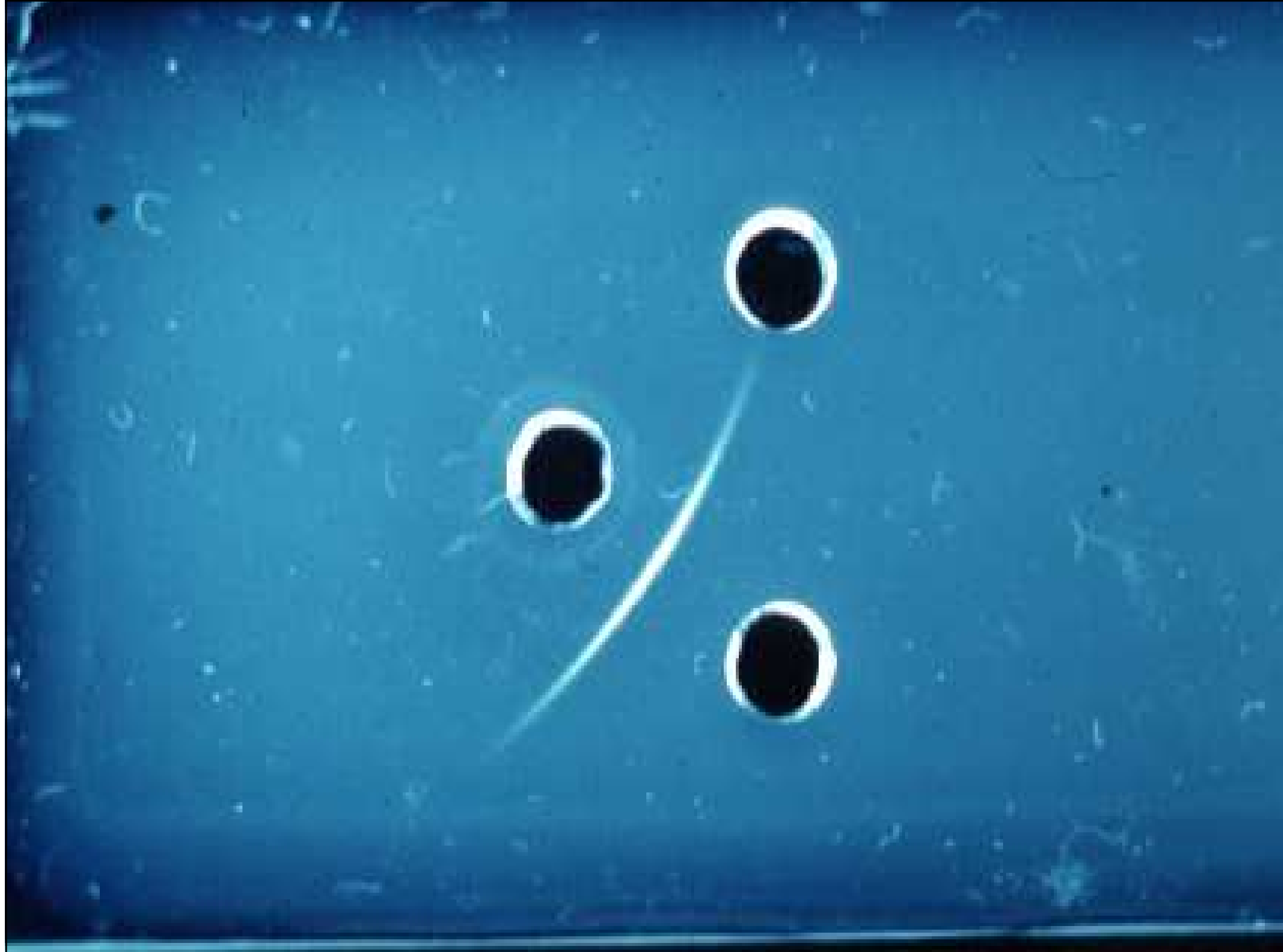
large aggregates form
at approximately equimolar concentrations
of Ag & Ab



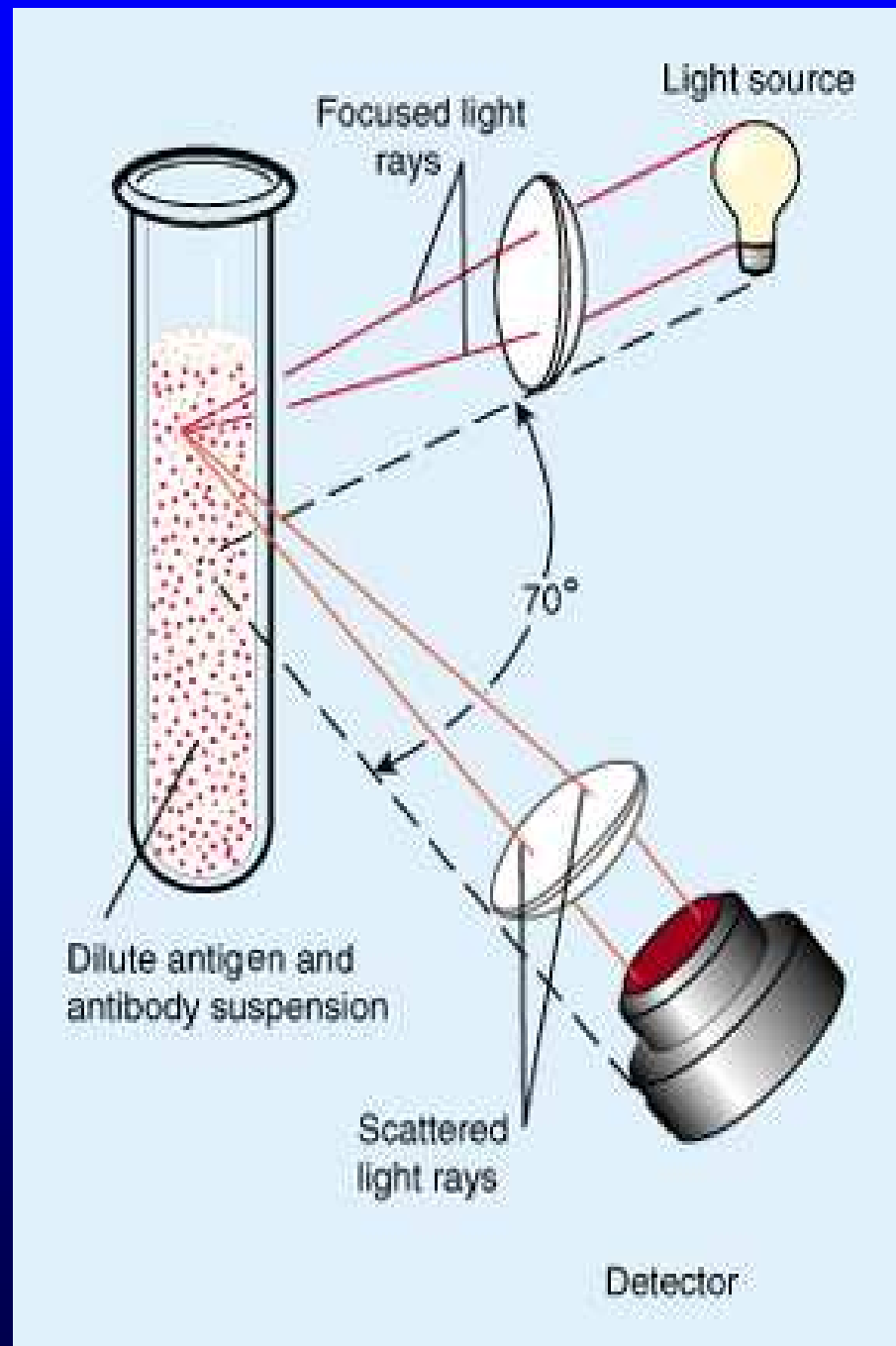
Vstříčná imunodifuze - III

precipitation of large Ag:Ab aggregates
forms the "precipitin" line





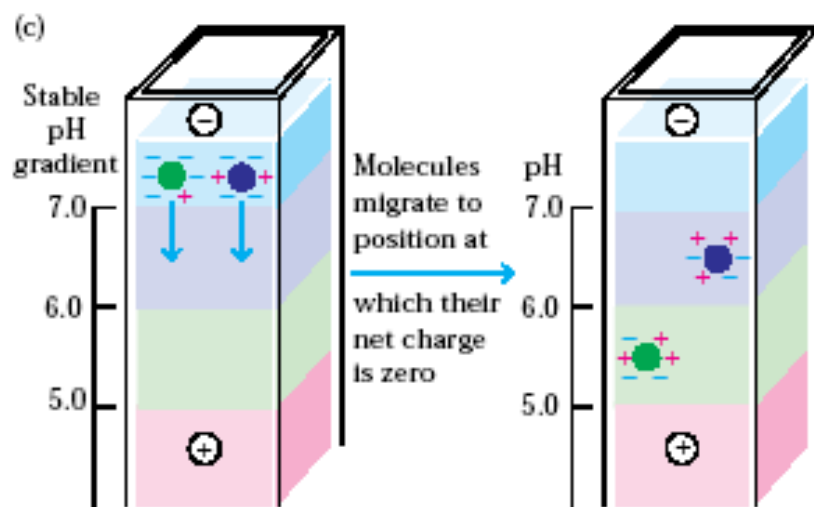
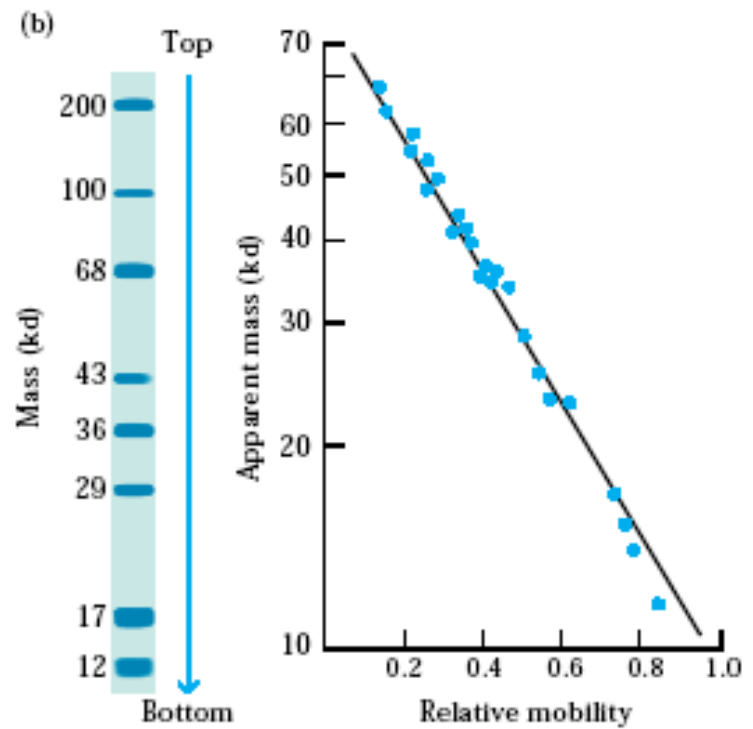
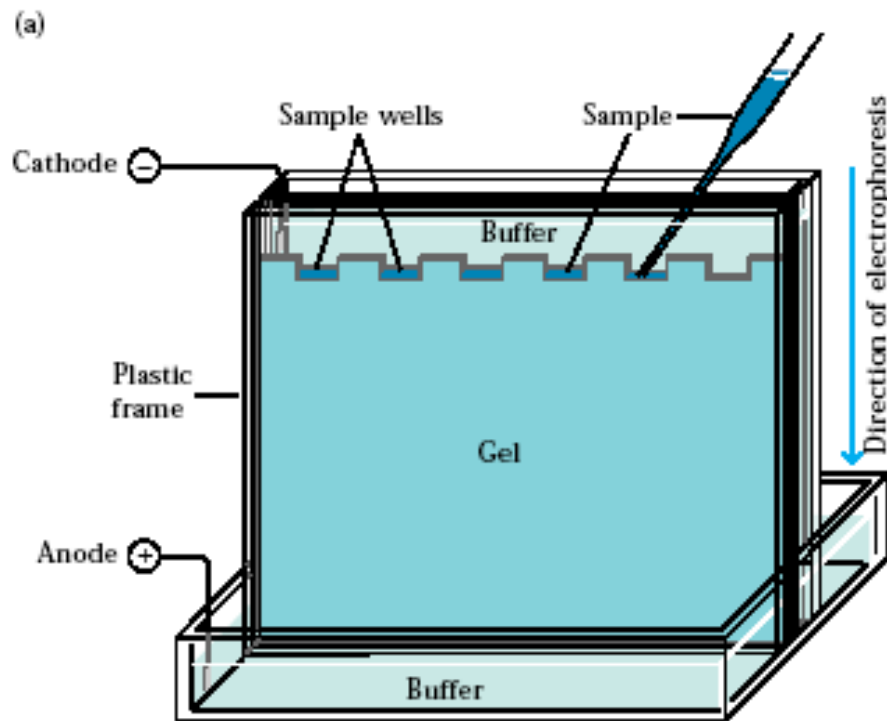
Nefelometrie





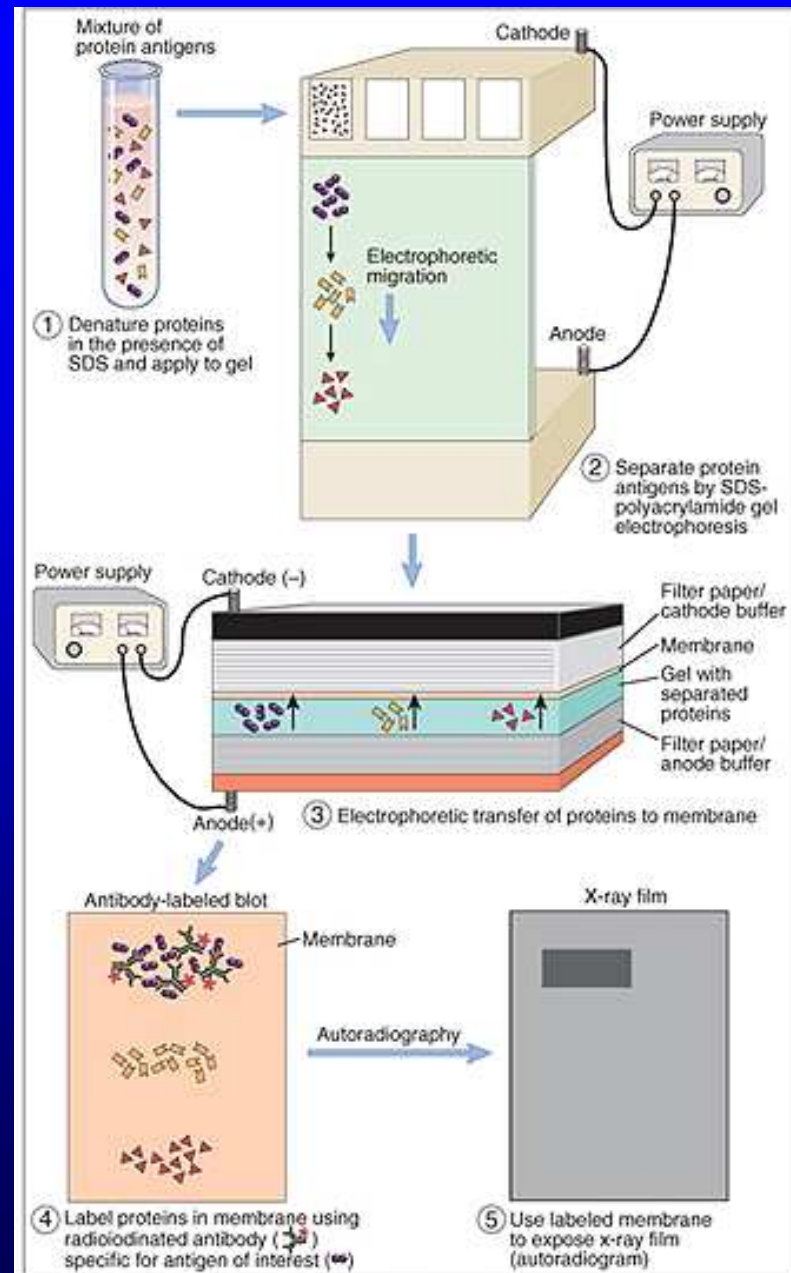
Gelová elektroforéza



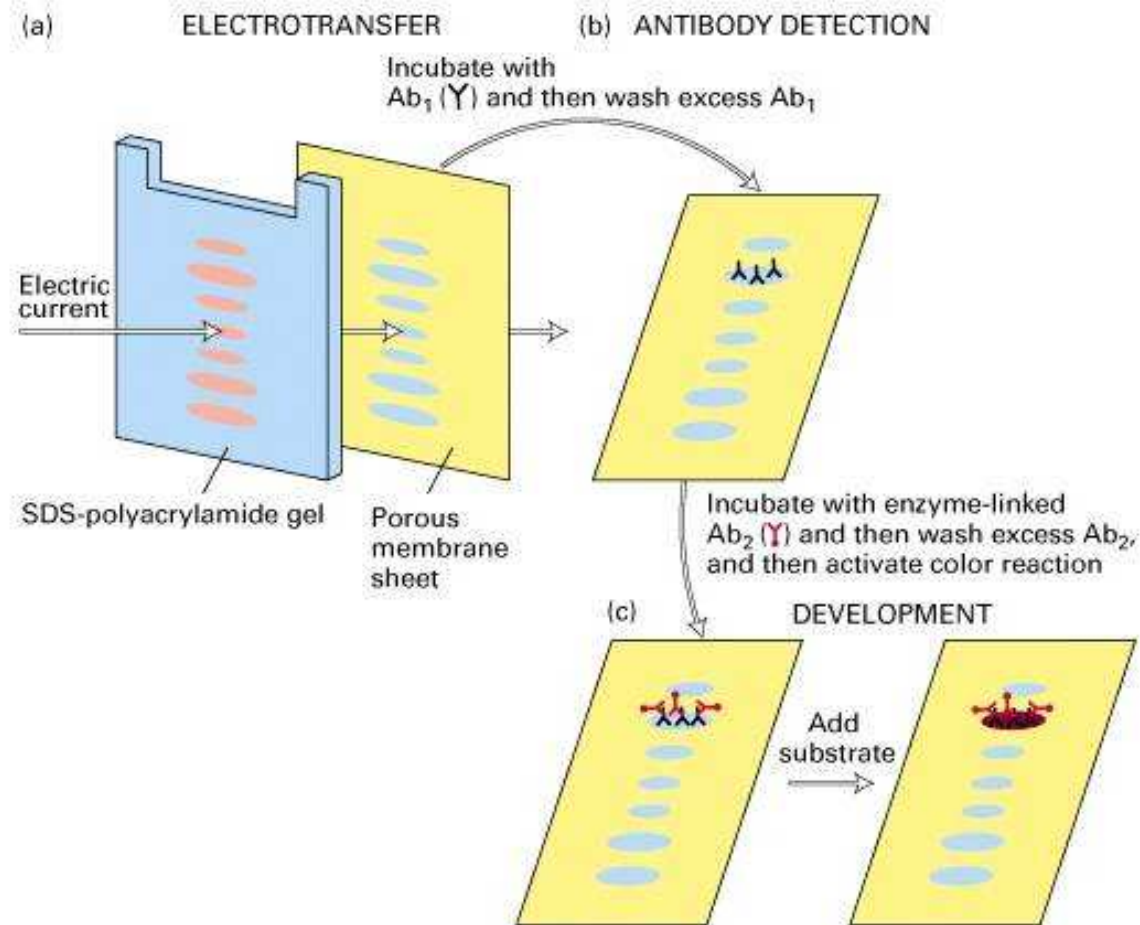


Gelová elektroforéza

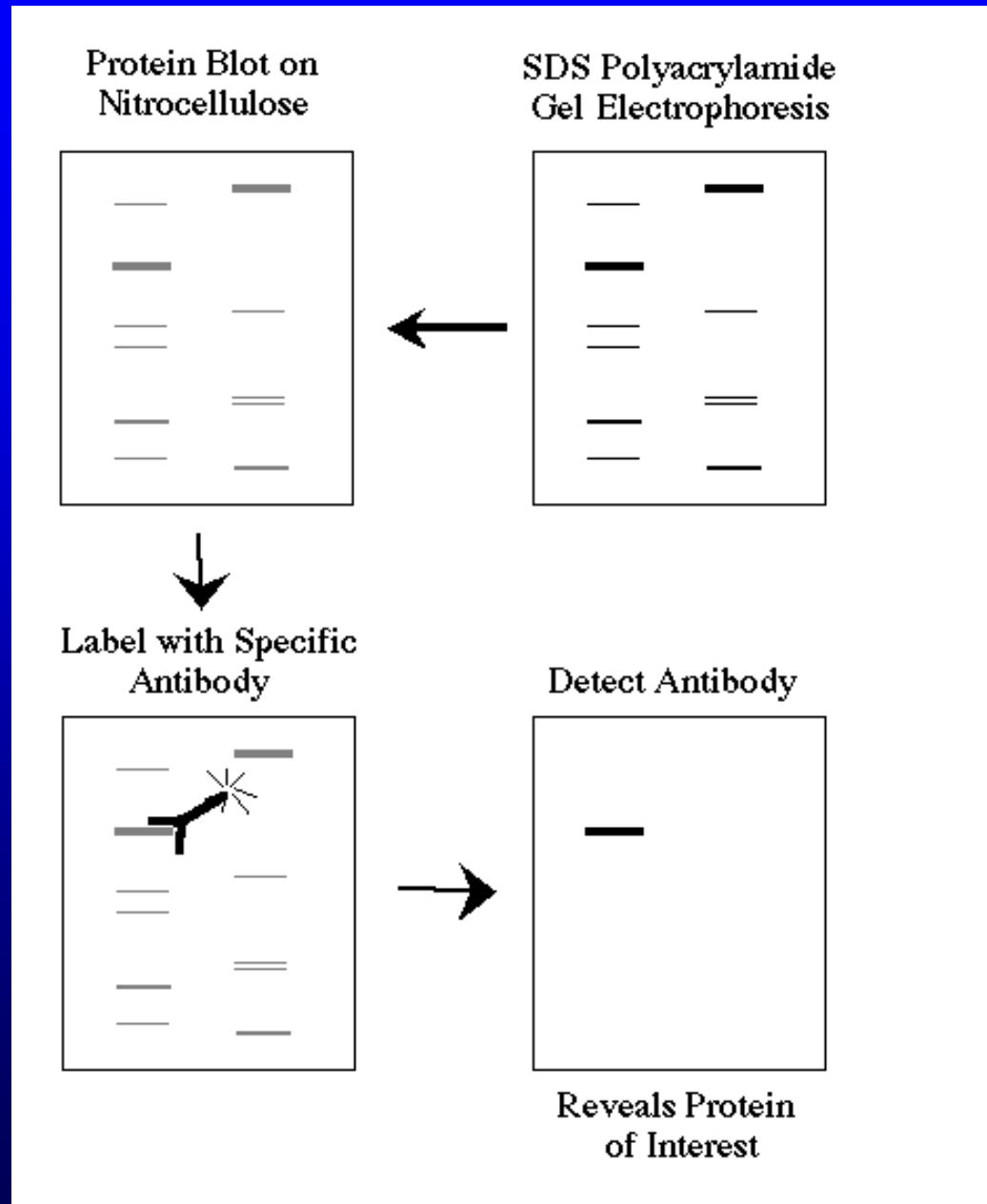
Immunoblotting = Western blotting



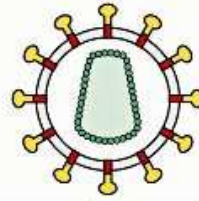
Western blotting



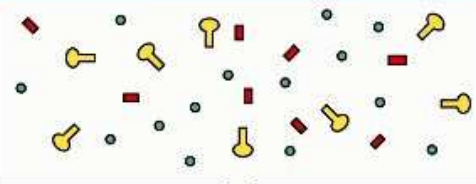
Western blotting



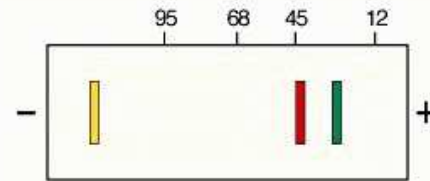
HIV



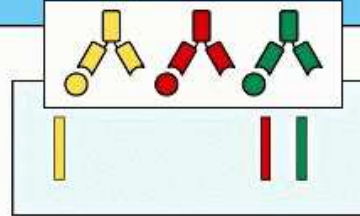
Dissociate in SDS



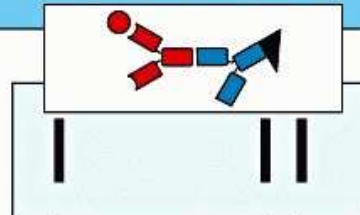
SDS-PAGE



Transfer to nitrocellulose and overlay with antiserum



Detect bound antibody with enzyme-linked anti-IgG



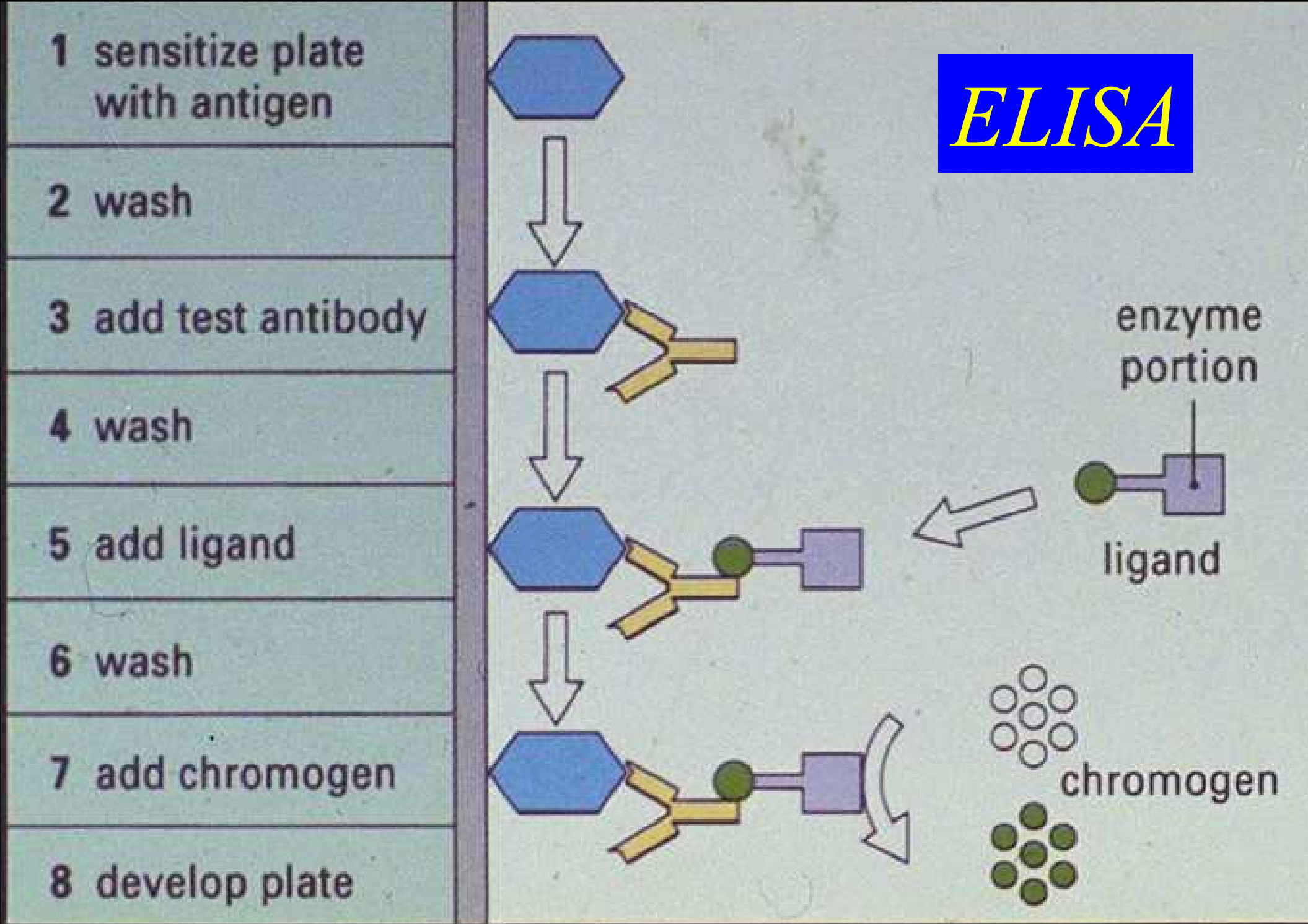
120 40 24

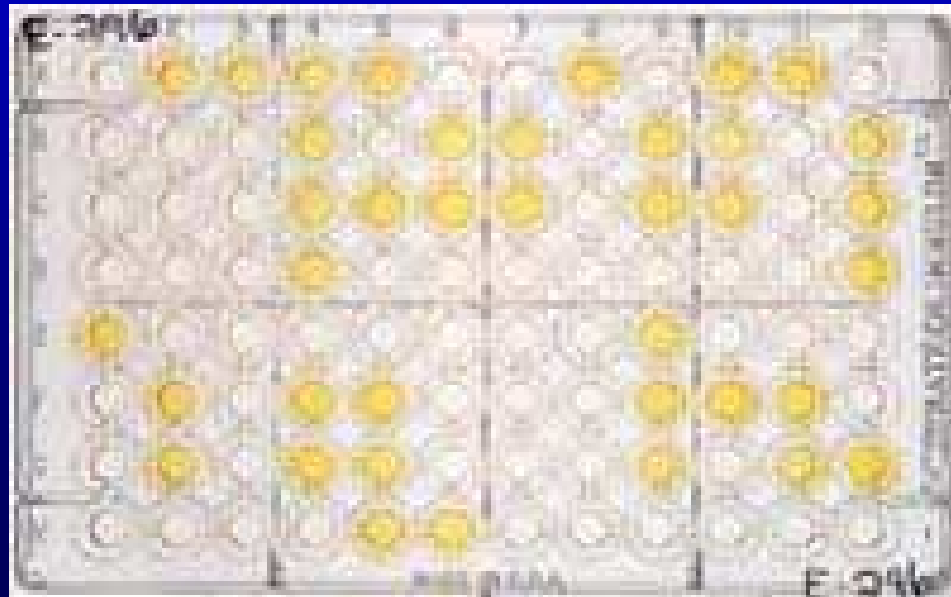


ELISA



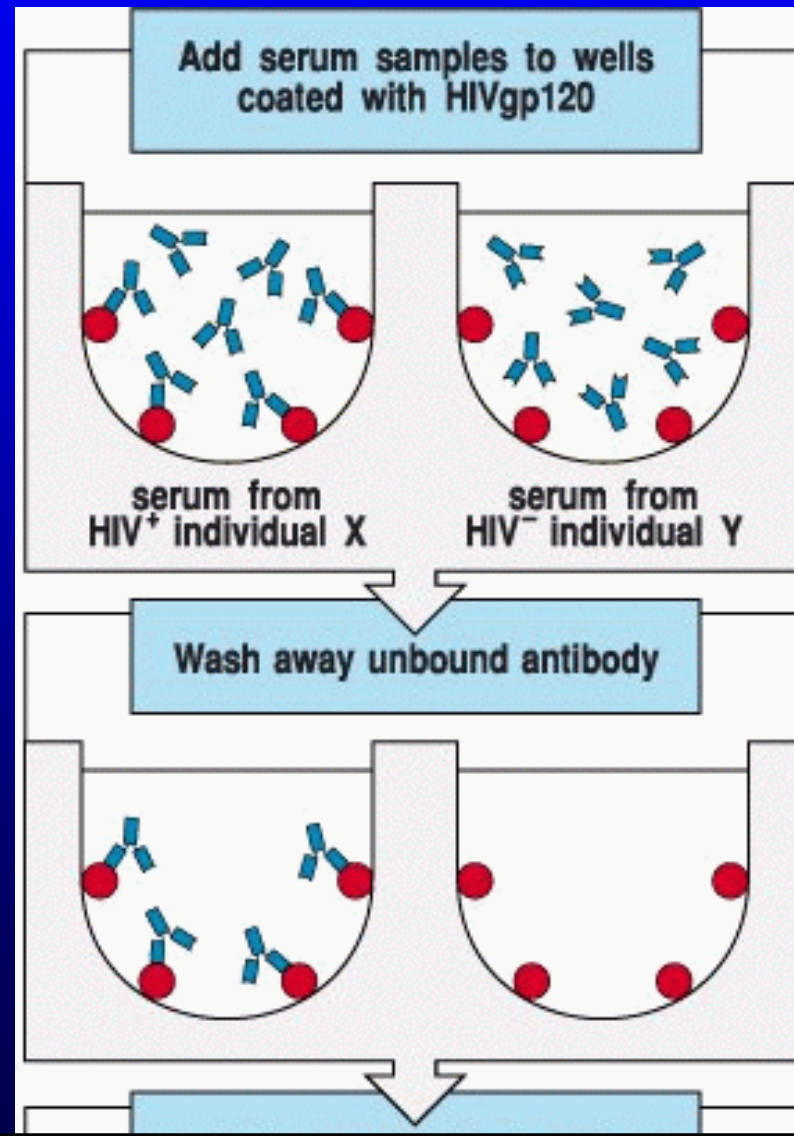
ELISA



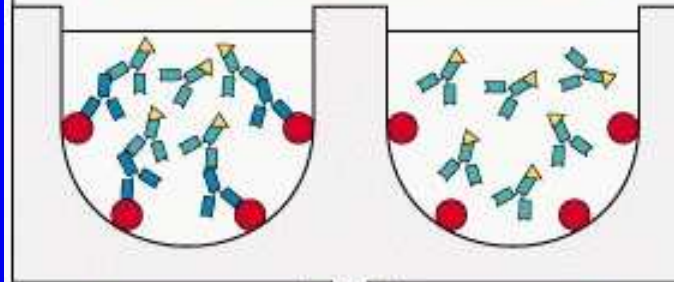


ELISA

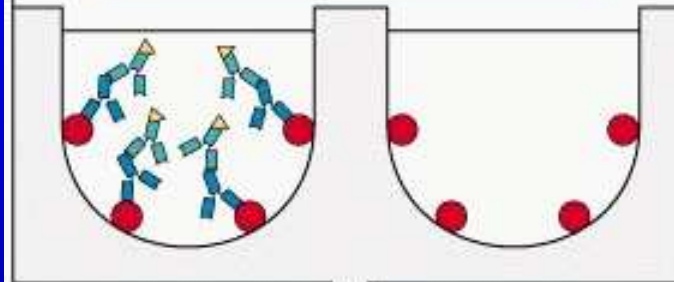
- vyšetření HIV pozitivity



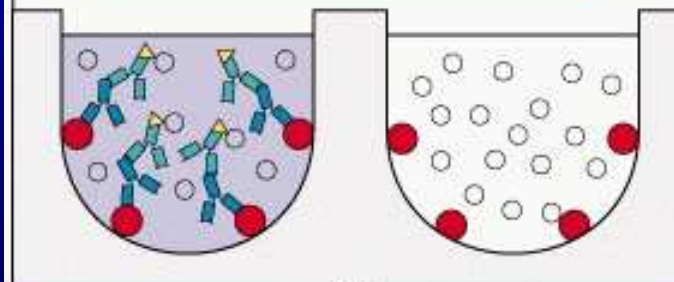
Add enzyme-linked anti-human immunoglobulin antibody



Wash away unbound antibody



Enzyme makes colored product from added colorless substrate



Measure absorbance of light by colored product

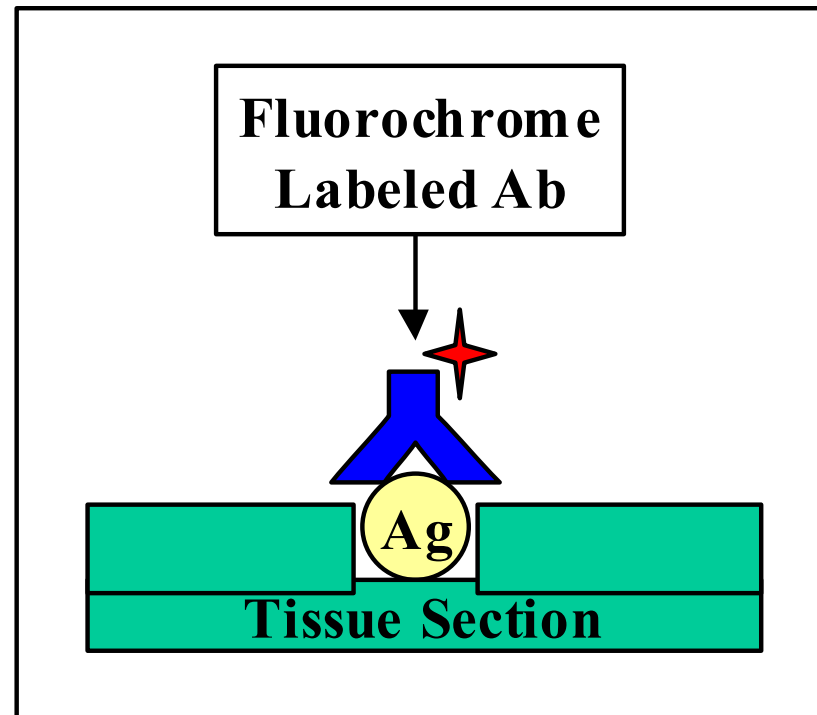


Imunofluorescence

- přímá
 - nepřímá
- 

Imunofluorescence

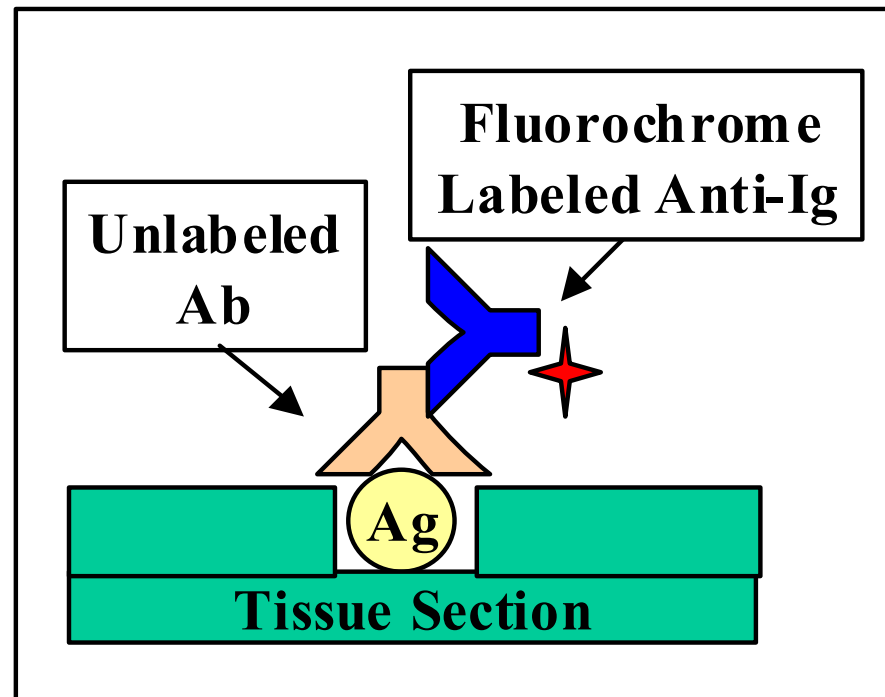
- Přímá



Imunofluorescence

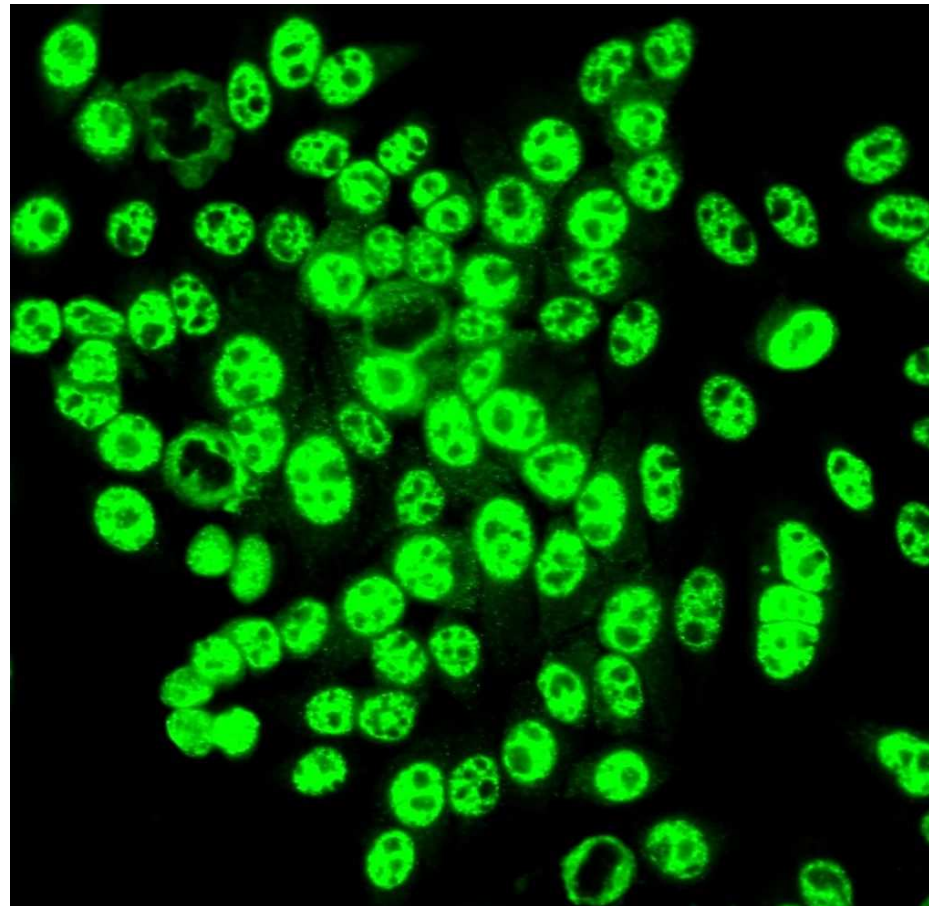
- Nepřímá

Sérum



ANA

Pozitivní granulární typ



*Foto: Dr. V. Thon, ÚKIA
FN u sv. Anny v Brně*



Systemový lupus erythematoses

