



NEURON

© Biochemický ústav LF MU (V.P.) 2007

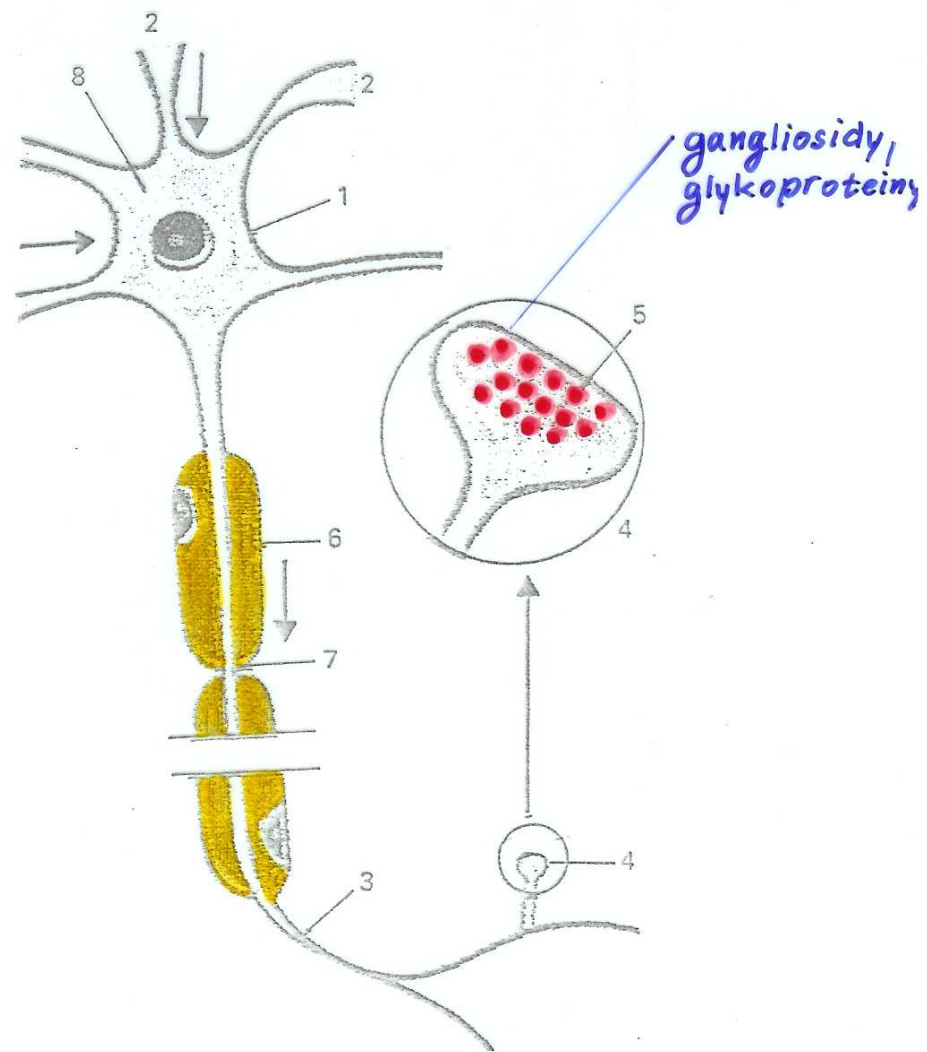


Schéma nervové buňky:

1 – tělo buňky; 2 – dendrity; 3 – axon; =neurit
 4 – synapse; 5 – synaptické vezikuly,
 6 – myelinová pochva; 7 – Ranvierovy
 zářezy; 8 – ER (Nisslova substance)

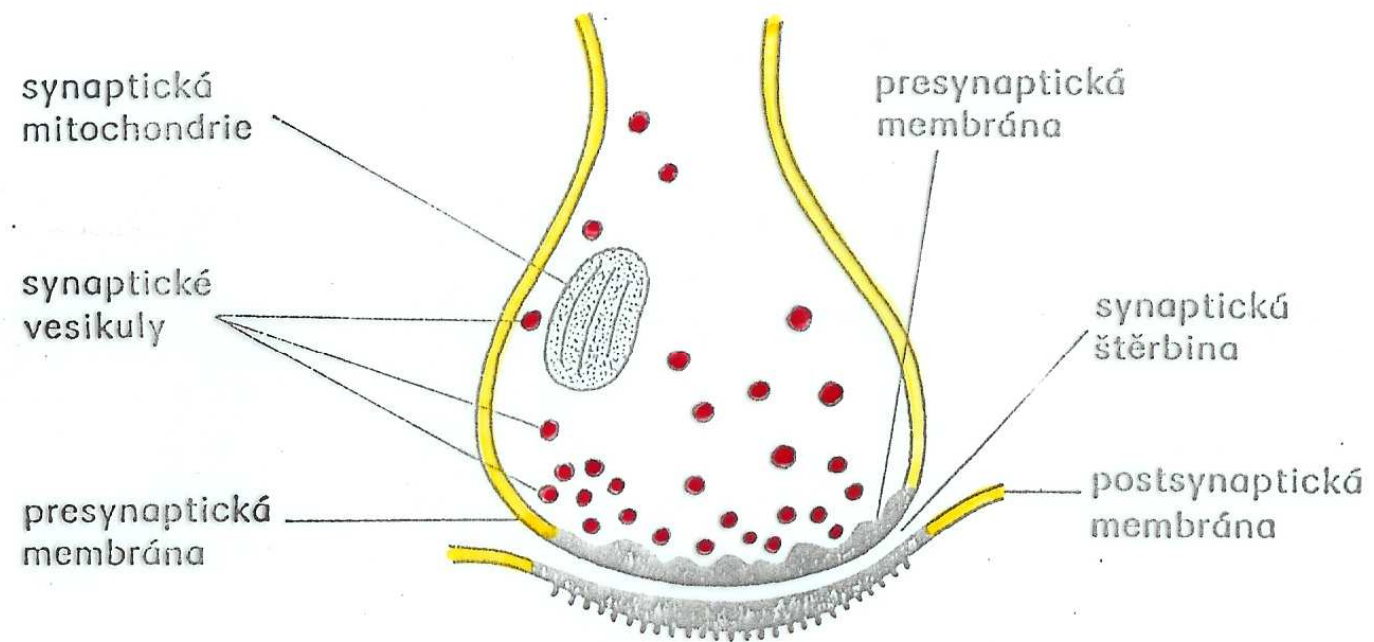
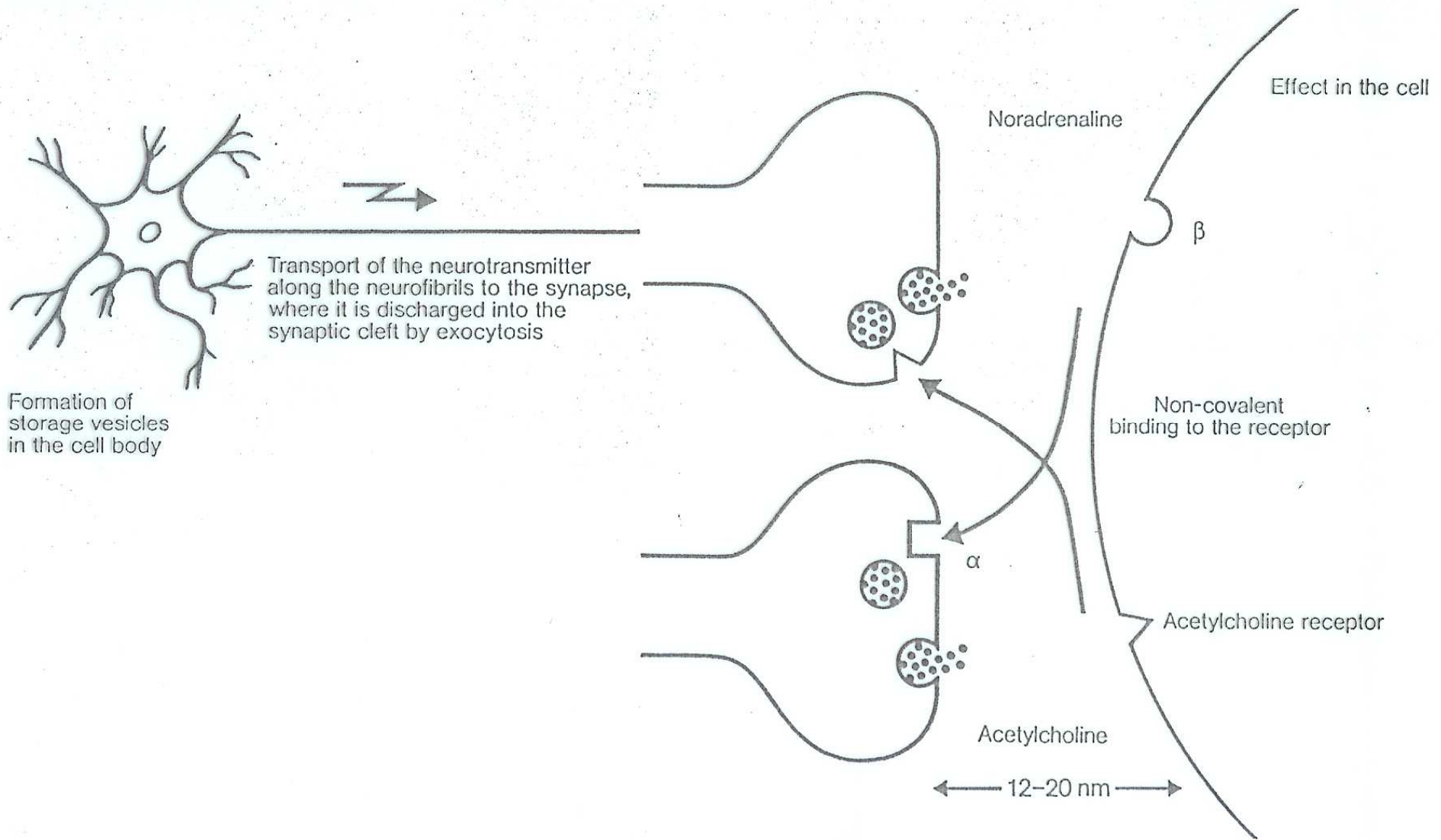
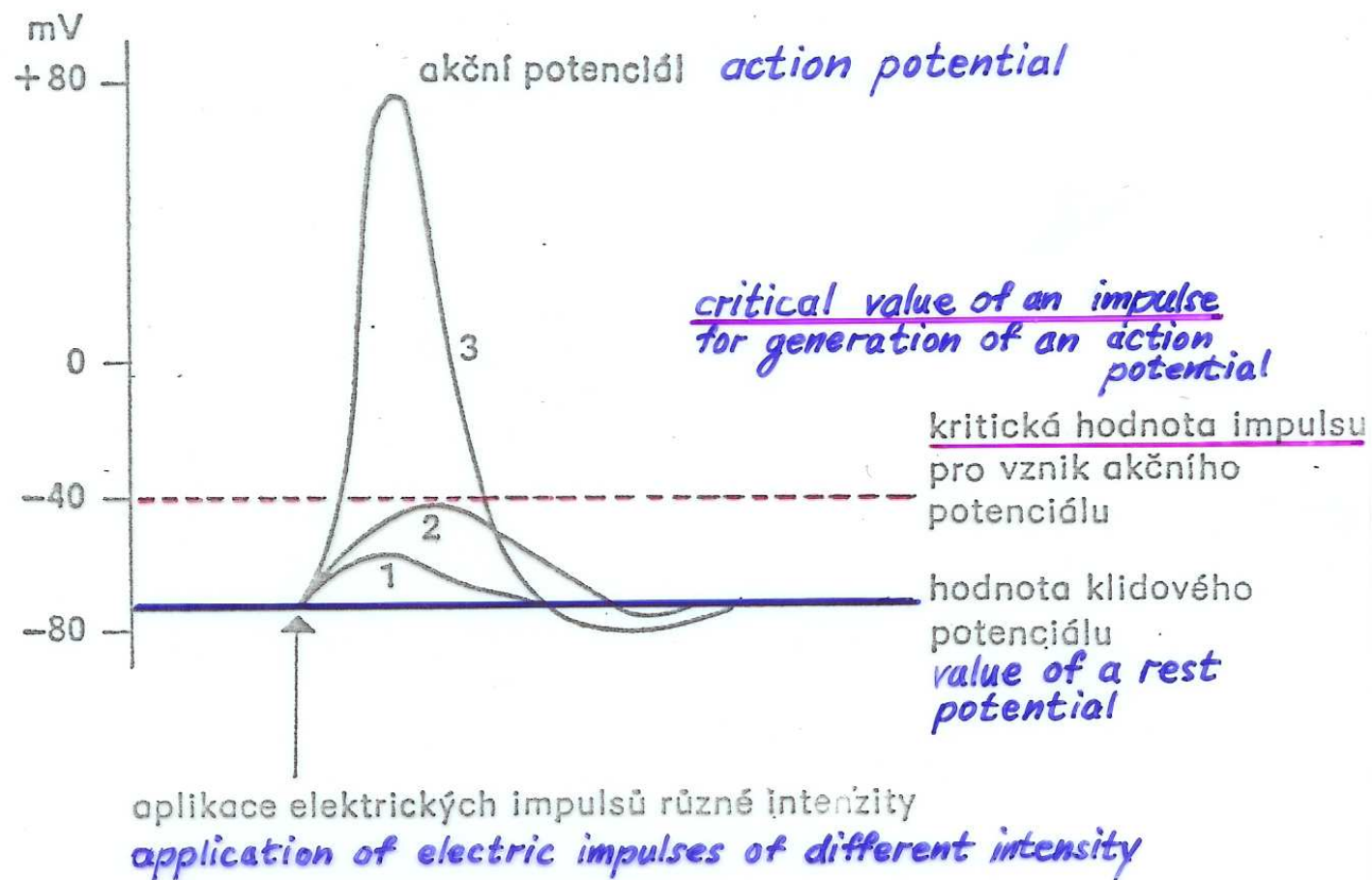
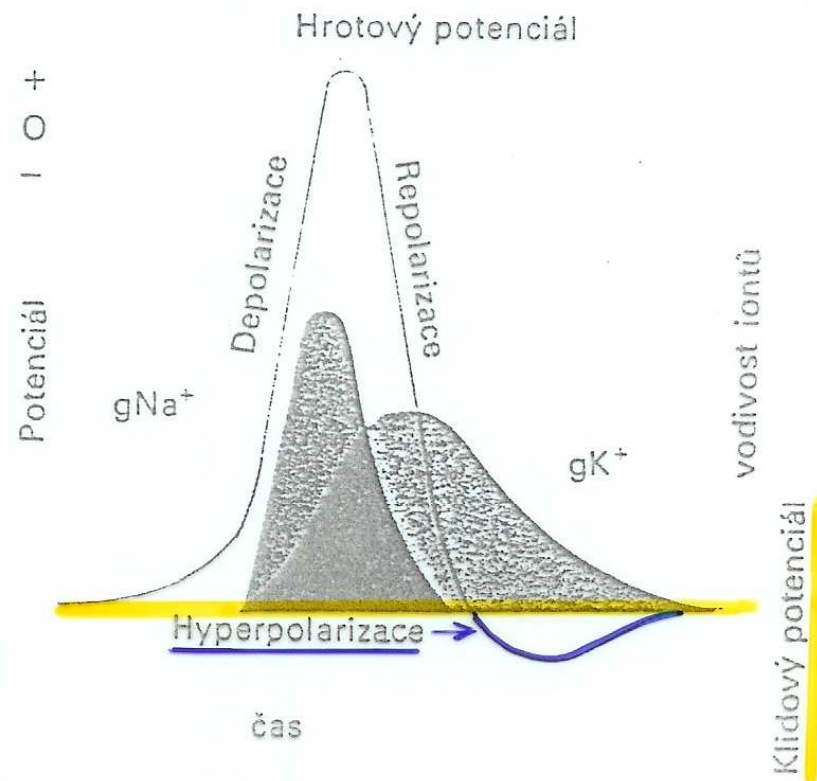


Schéma centrální cholinergní synapse

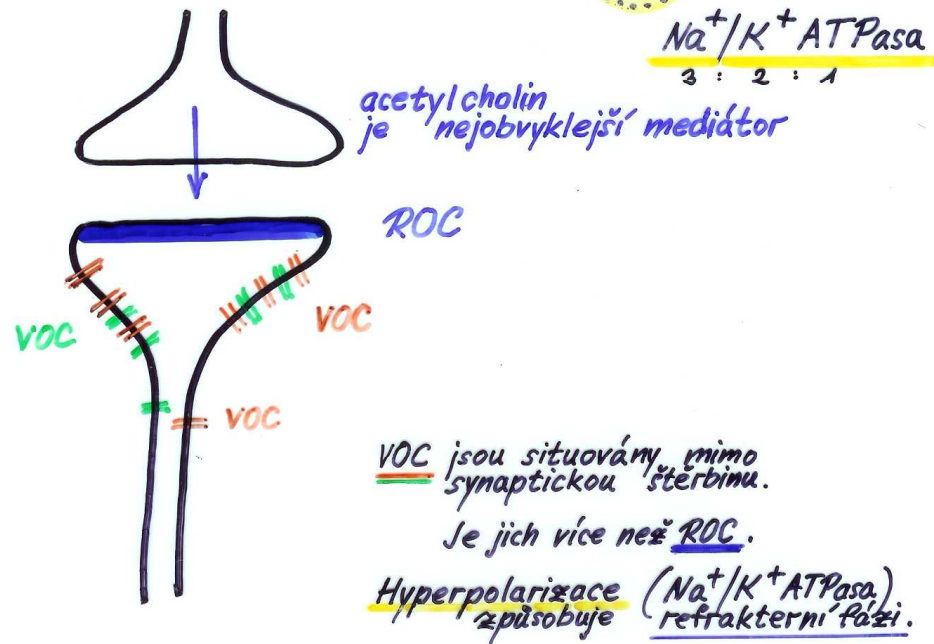
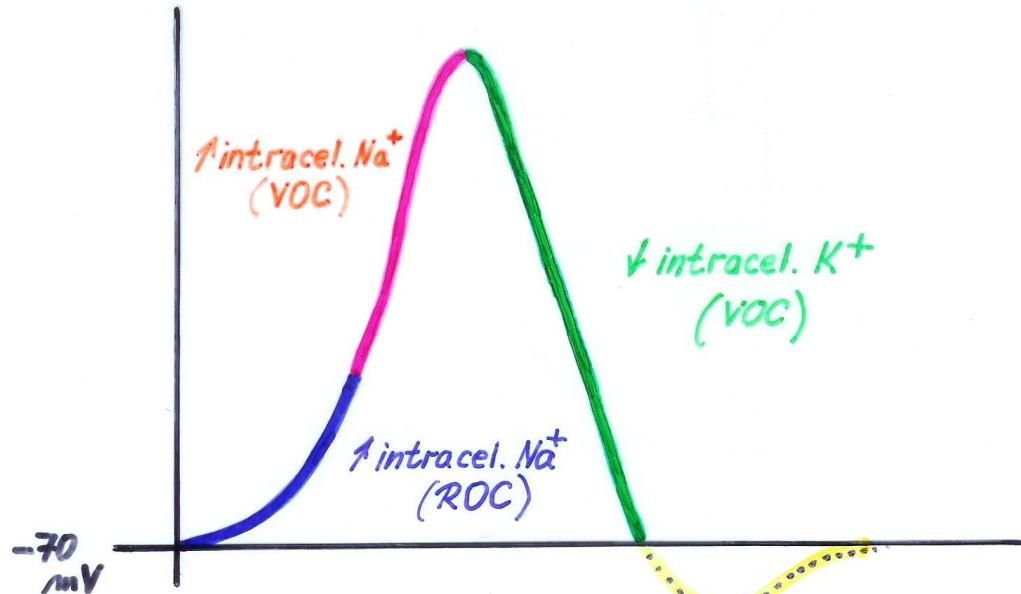




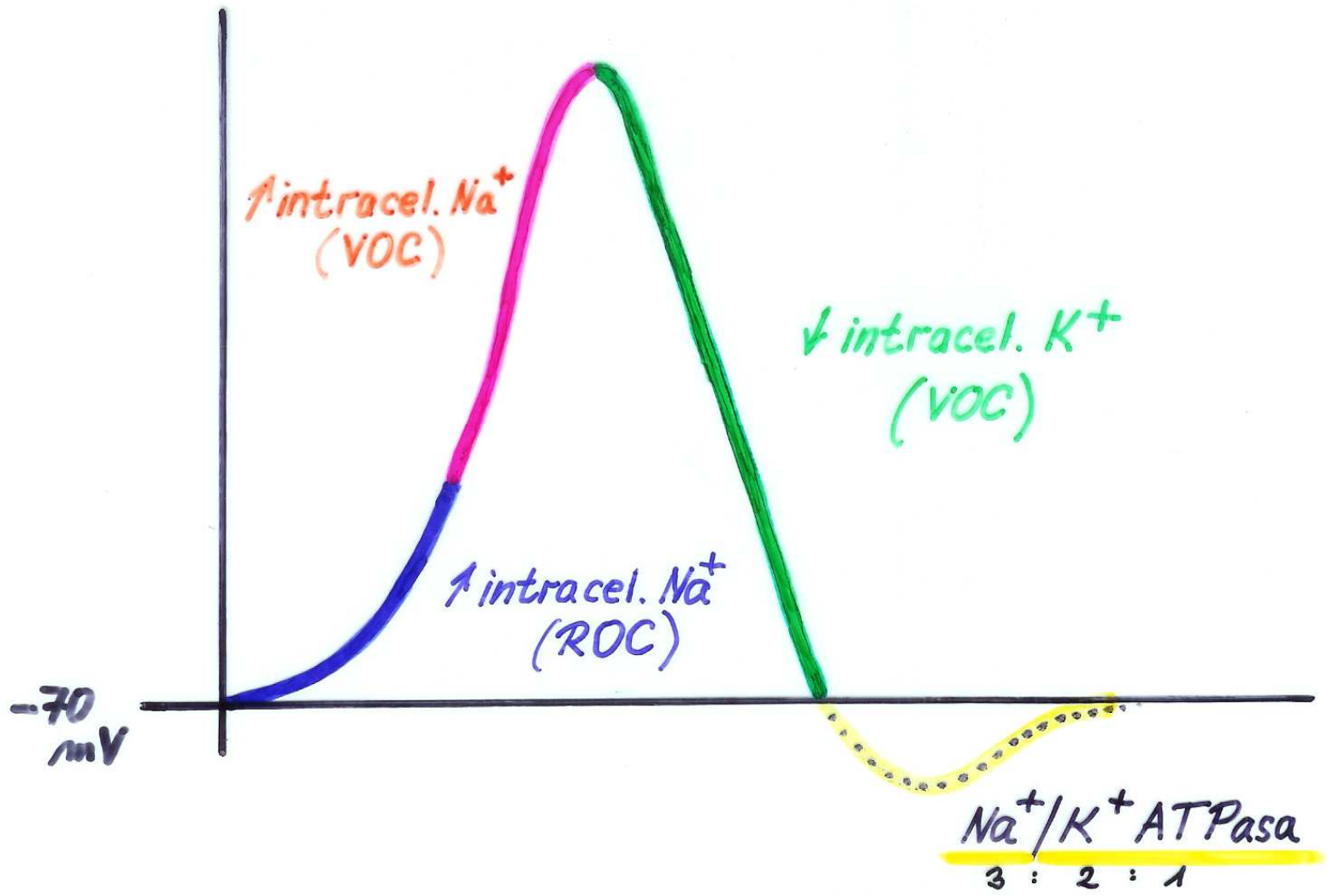


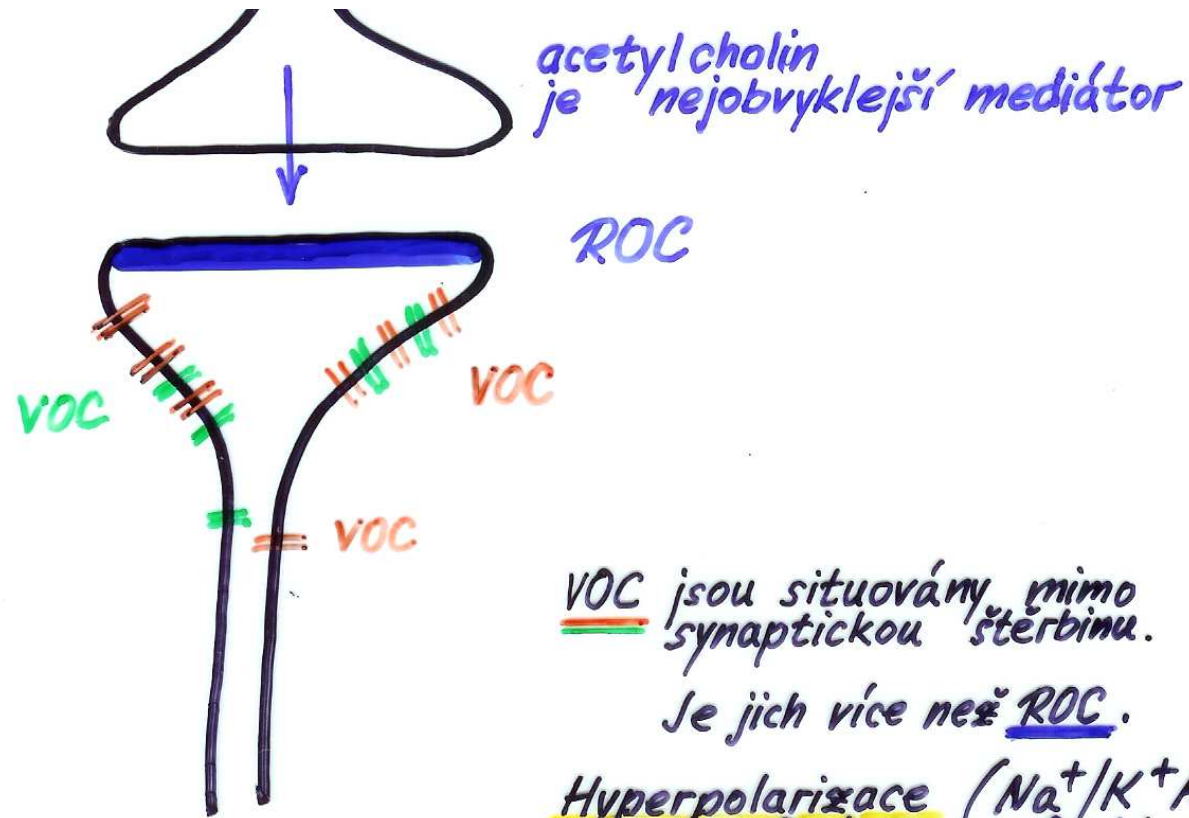
$g_{Na^+}, g_{K^+} = \text{vodivost } Na^+, K^+$

Vznik a průběh akčního
potenciálu



VOC = voltage operated channels
ROC = receptor ——— " ———





acetylcholin
je nejobvyklejší mediátor

ROC

VOC

VOC

VOC

VOC jsou situovány mimo
synaptickou šterbinu.

Je jich více než ROC.

Hyperpolarizace ($\text{Na}^+/\text{K}^+\text{ATPasa}$)
způsobuje refrakterní fázi.

VOC = voltage operated channels

ROC = receptor ——— " ———

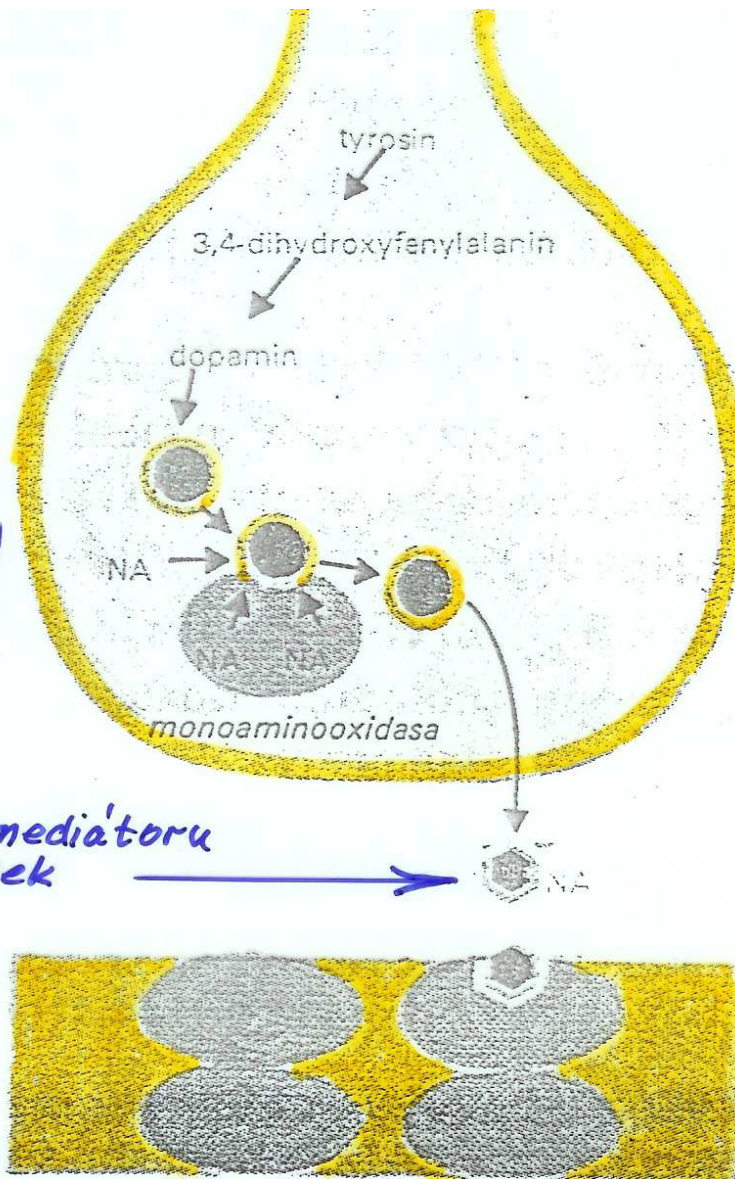
MEDIA'TOR

1) syntéza v pre-synapticke' oblasti (cytoplazma, vesikuly)

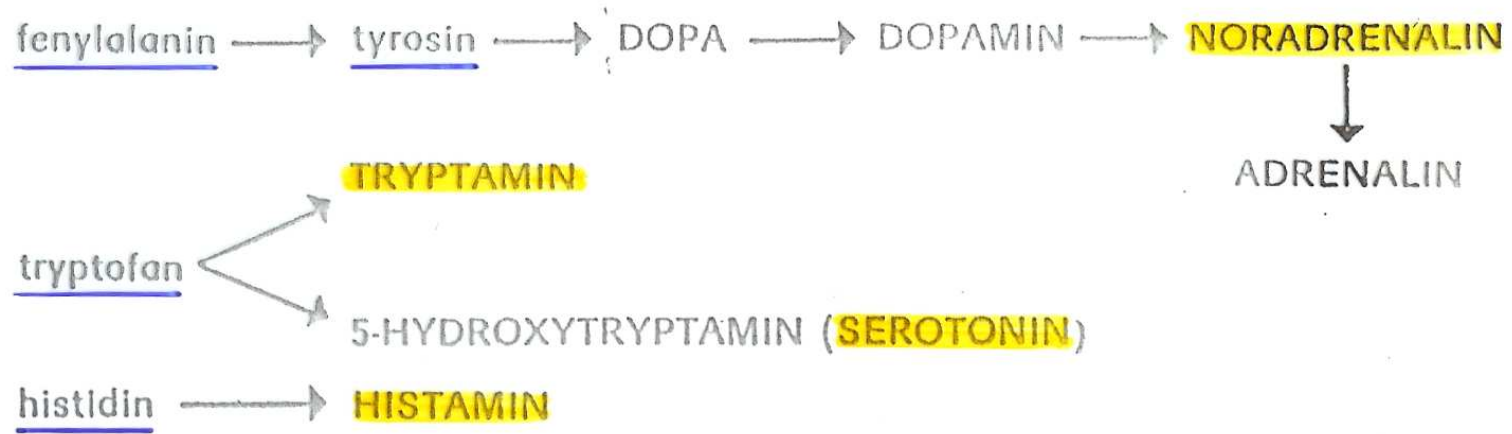
2) sekrece z vesikul dle výšky akčního potenciálu

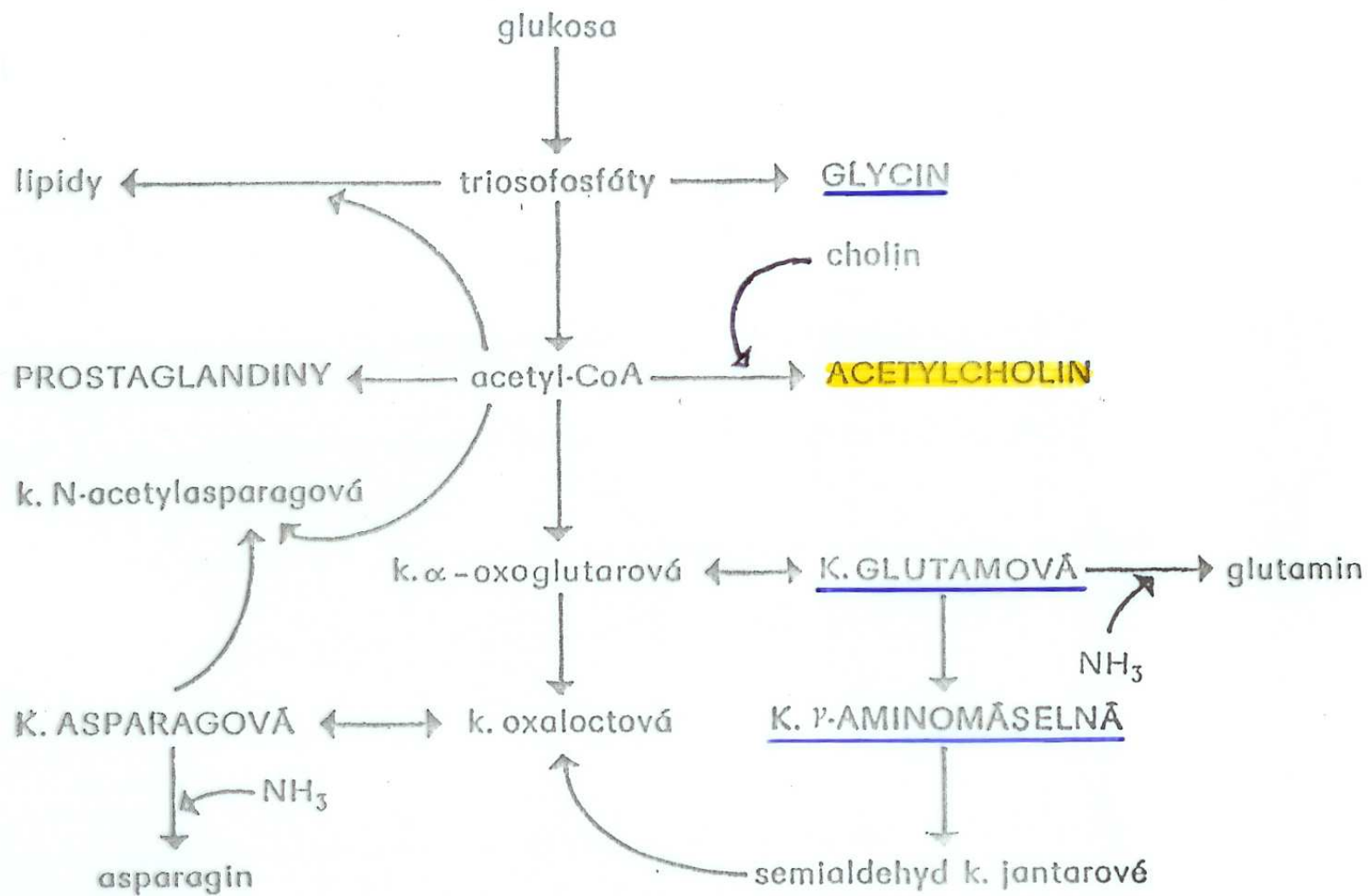
3) exogenní aplikace mediátoru má shodný účinek

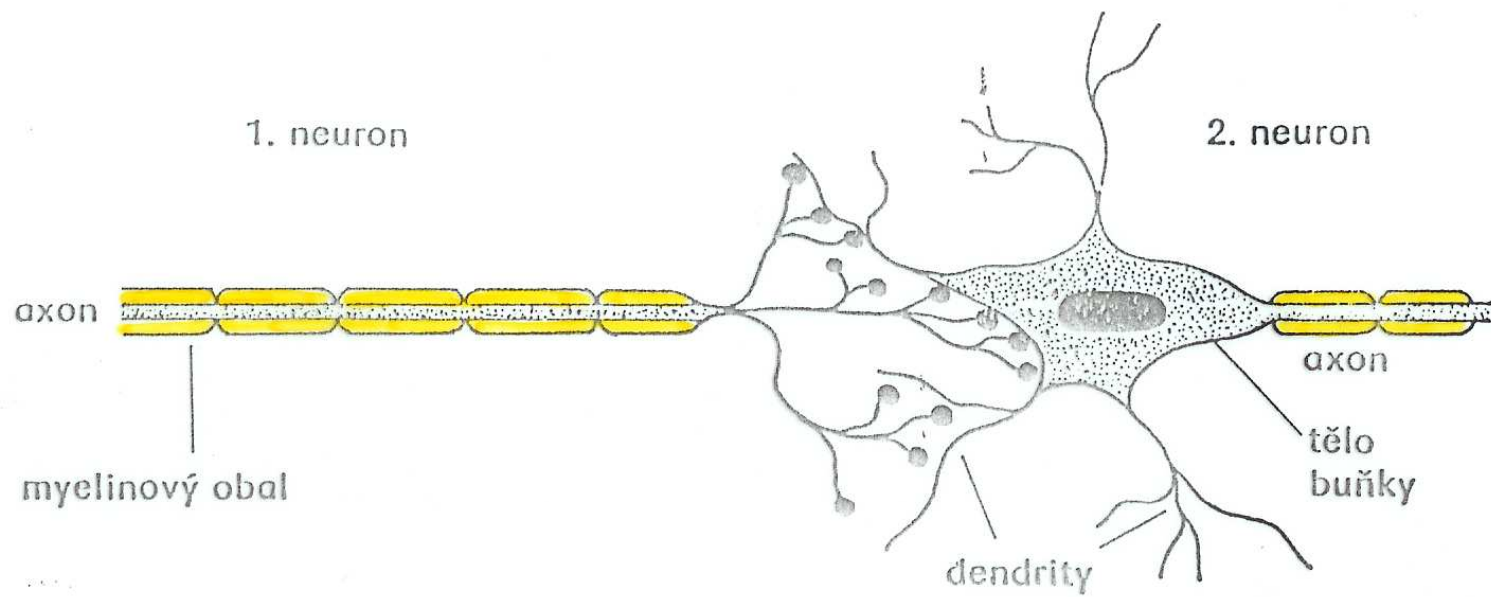
4) receptory + inaktivací systémy



depolarizace
nebo hyperpolarizace







Synaptická spojení mezi neurony (axon → dendrity, axon → tělo buňky)

