

Glutamát

a szerotoninerg rendszerben

Domonkos Andor

MTA KOKI

hippocampus

szinaptikus kapcsolat

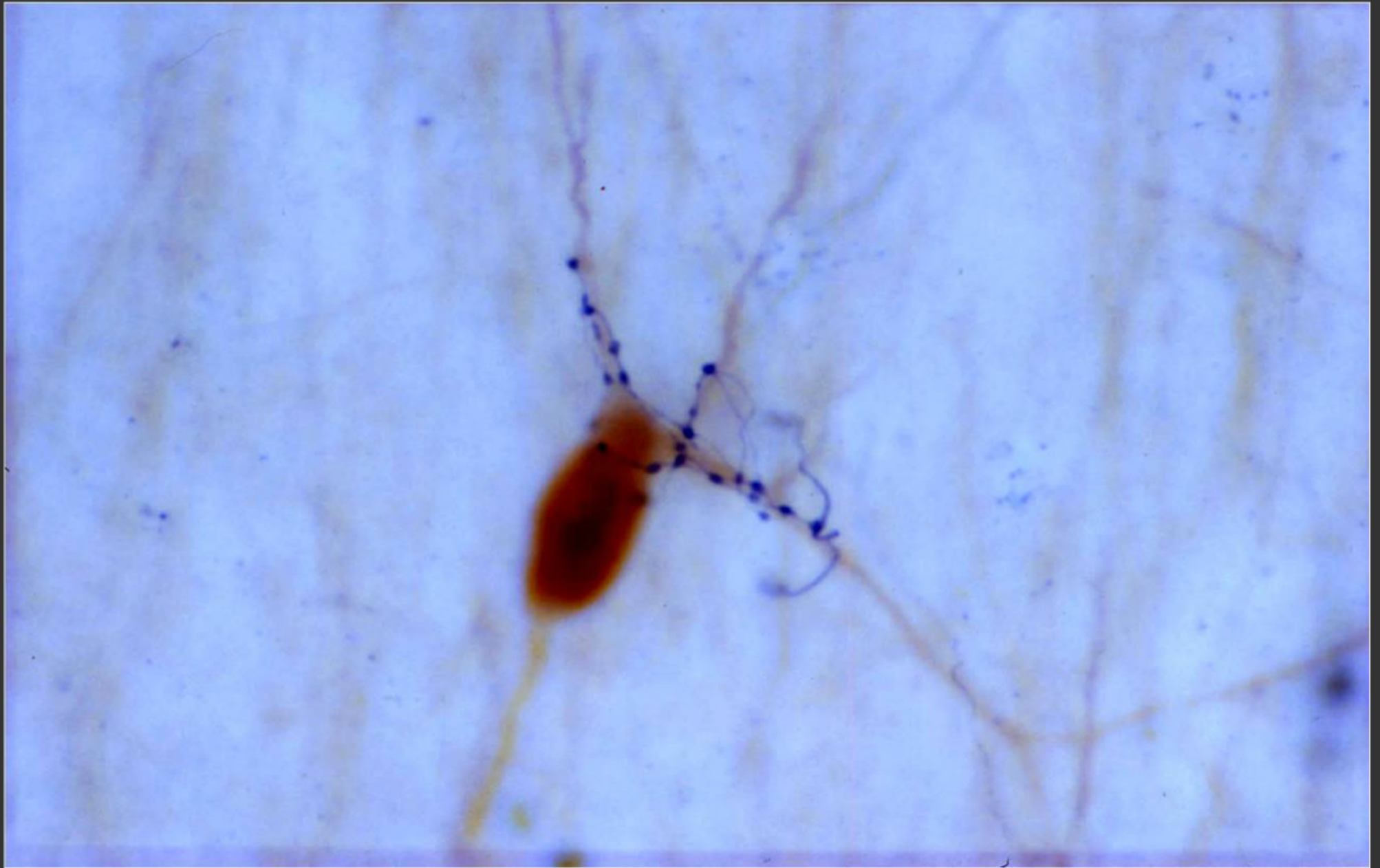
"volume transmission"

raphe

medianus

dorsalis

Raphe-rostok hippocampalis interneuron (CCK(+))



Freund et al. 1990, PNAS

Cholera Toxin B

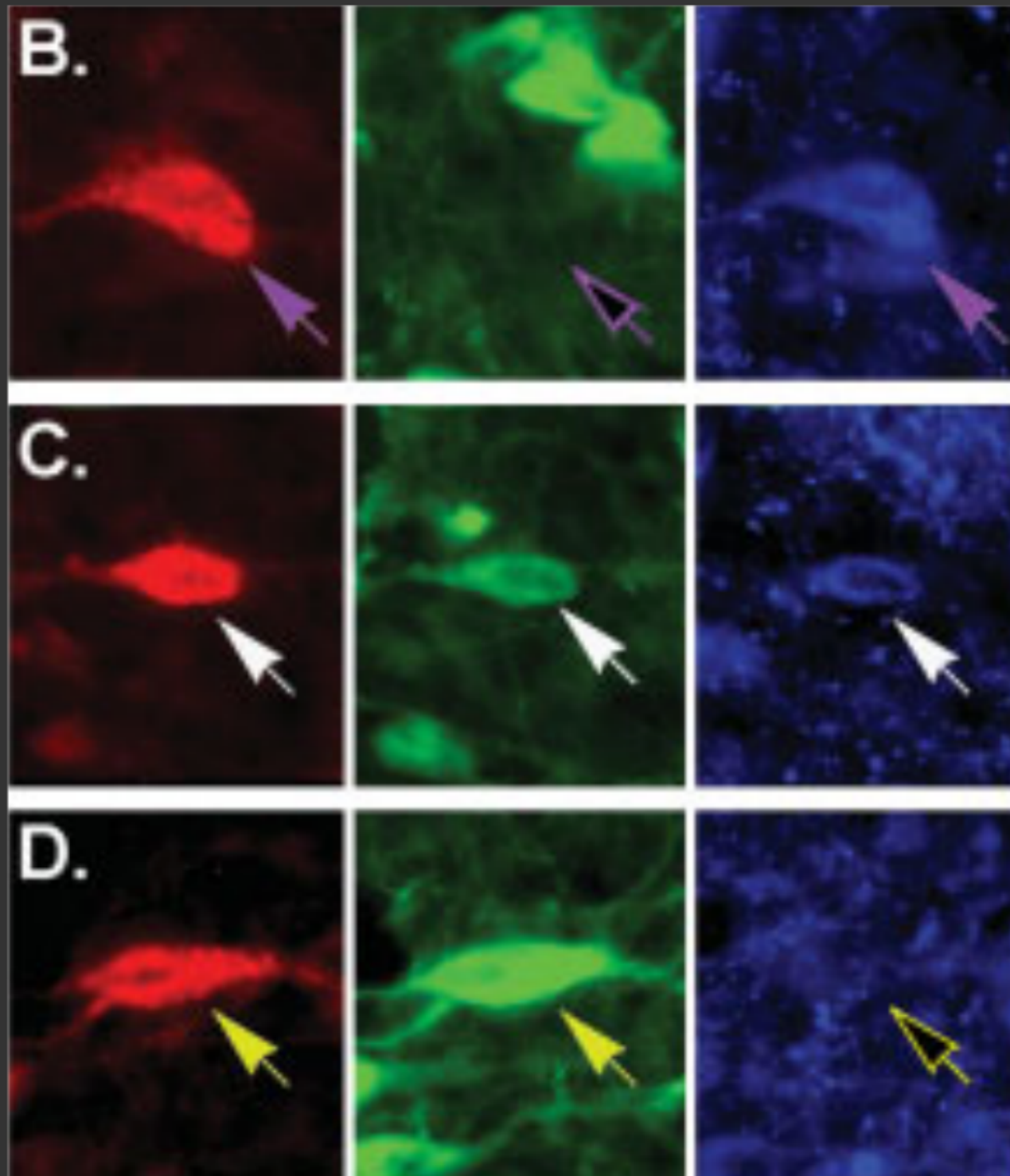
beadás hippocampusba

TpH

szerotonin-szintézis!

VGluT3

vezikuláris Glu-transzporter

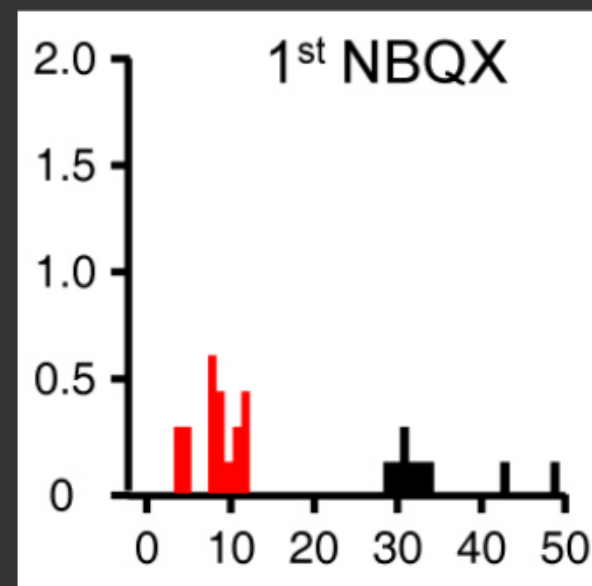
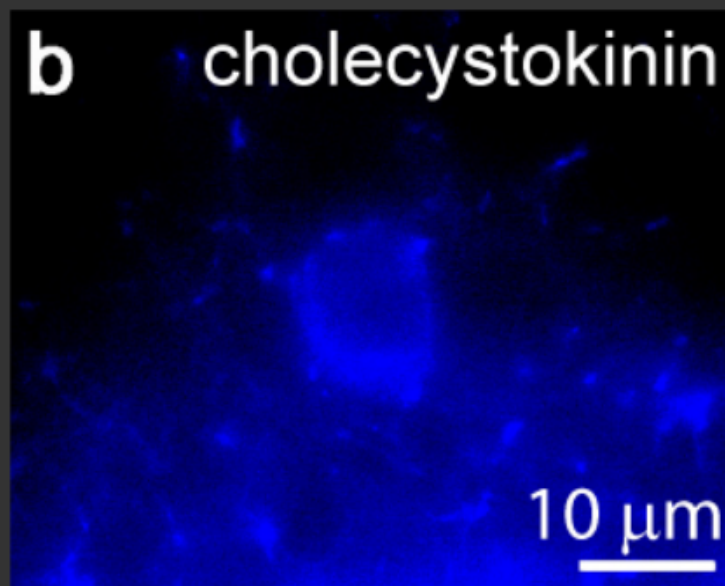
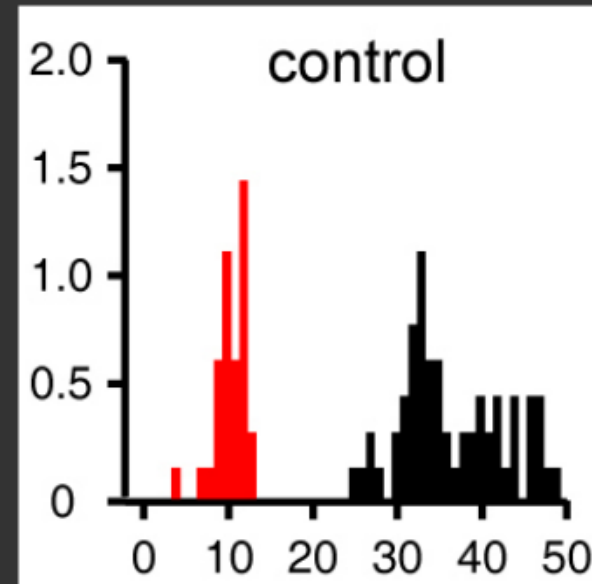
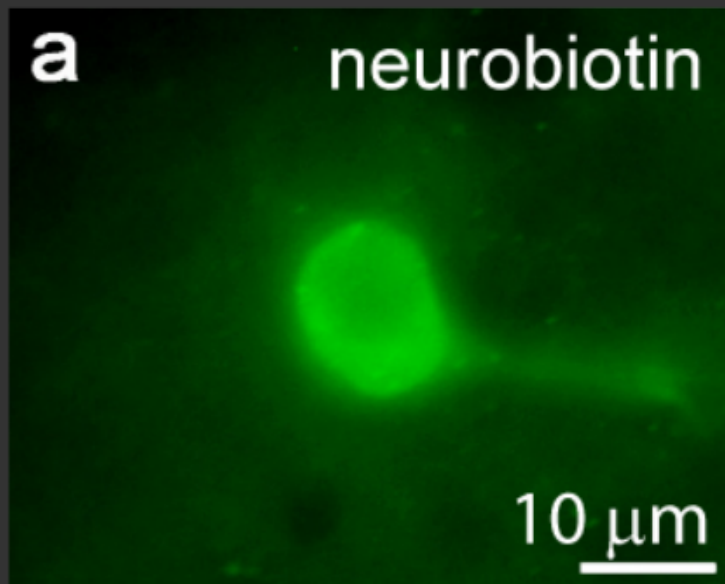


Jackson et al. 2009, Synapse

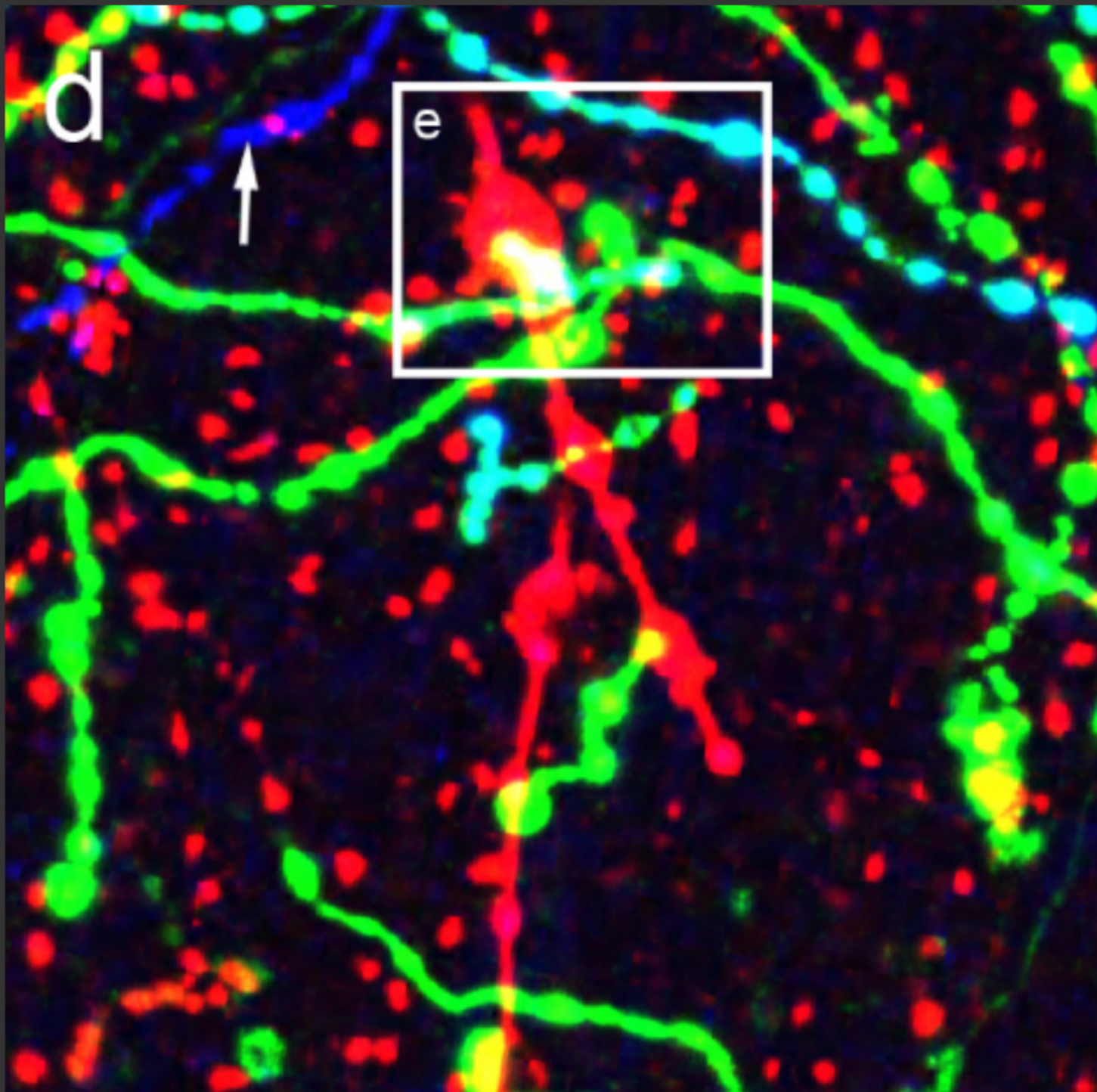
Gyors aktiváció a MR stimulálásának hatására

regisztrált hippocampalis
interneuron

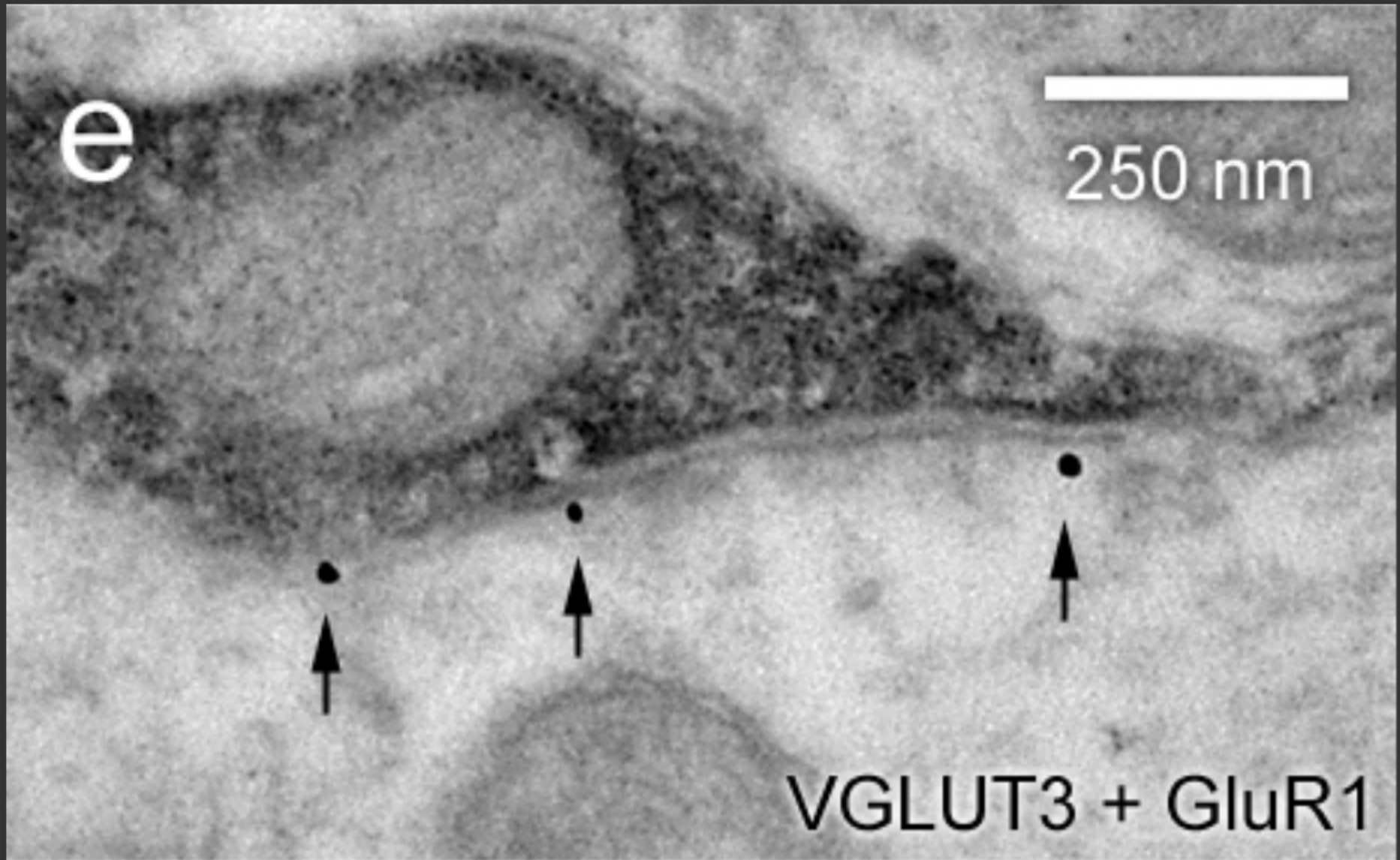
MR stimulálás hatása
(NBQX: AMPAR-blokkoló)

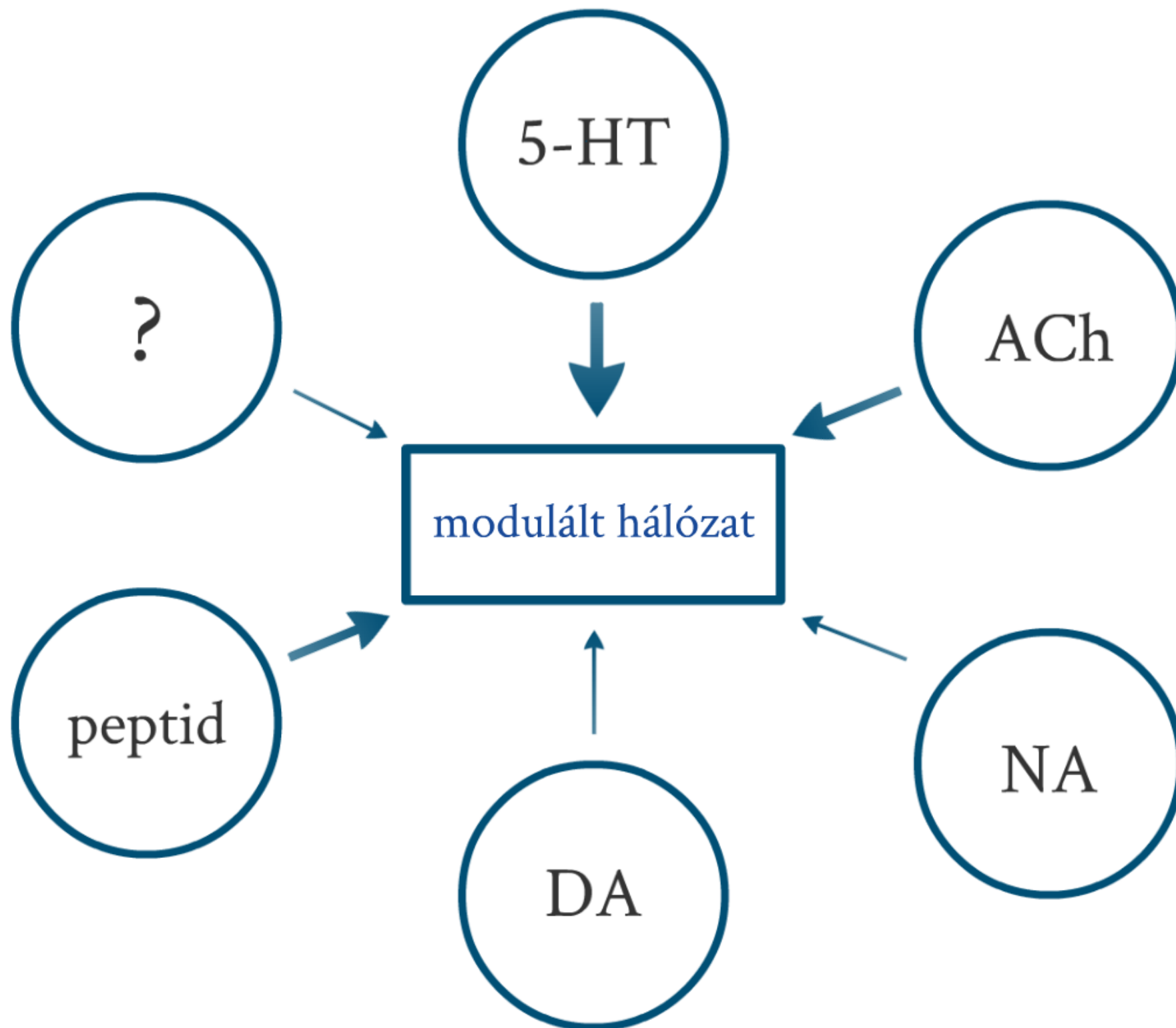


VGluT3 a raphe-hippocampalis rostokban



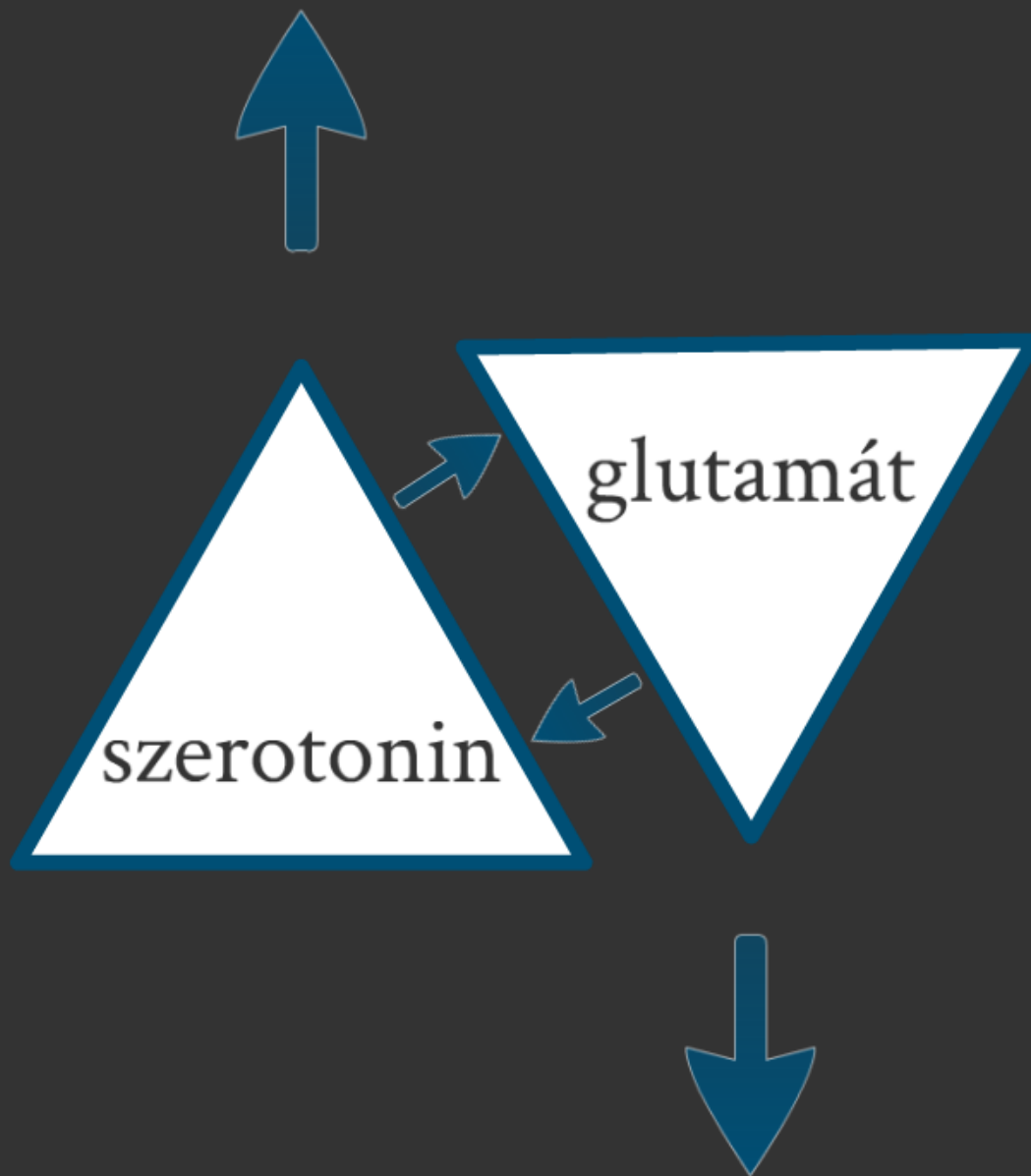
AMPA-R alegységek a MR-hippocampalis szinapszisban







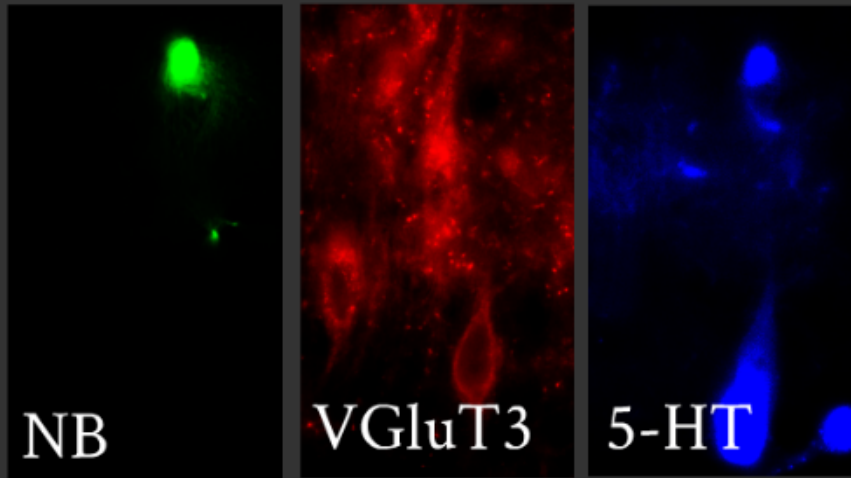
5-HT



Példák regisztrált MR neuronokra

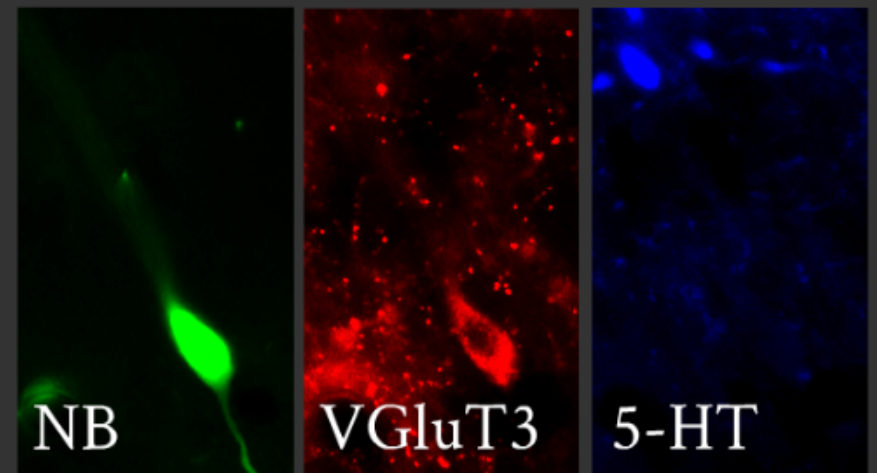
5-HT(+)

NB = Neurobiotinnal feltöltött sejt

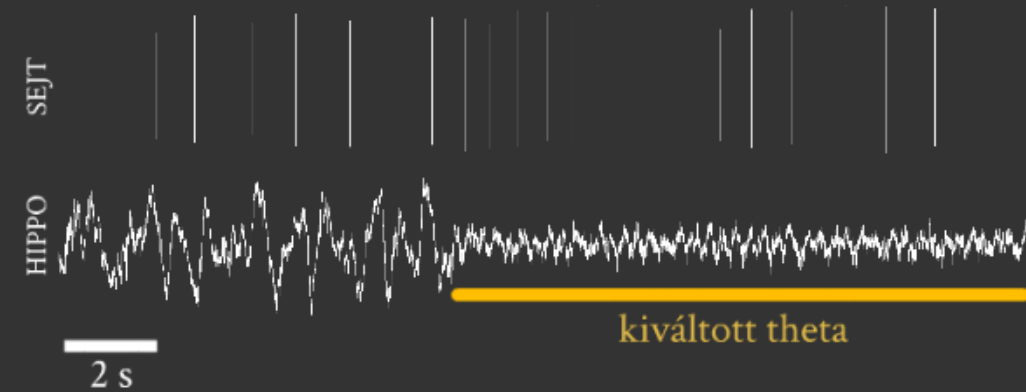


VGluT3(+)

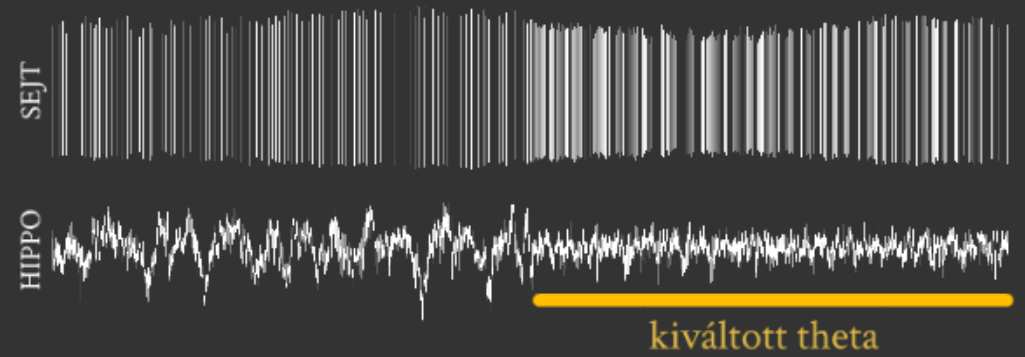
NB = Neurobiotinnal feltöltött sejt



JUXTACELLULÁRIS REGISZTRÁTUM

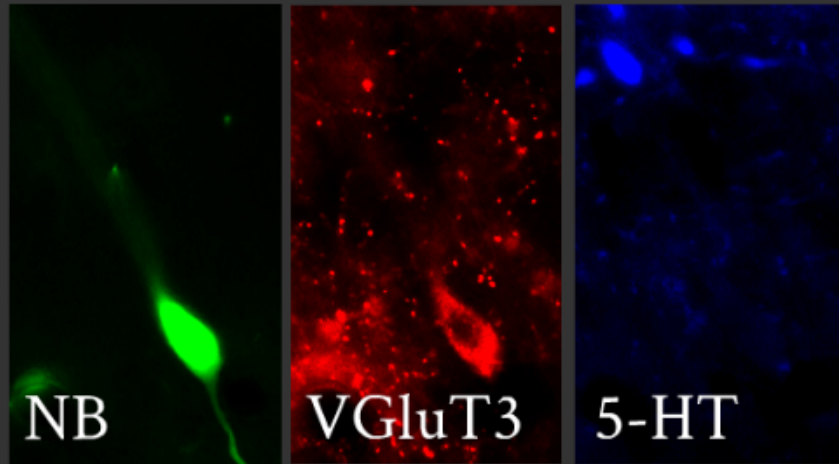


JUXTACELLULÁRIS REGISZTRÁTUM



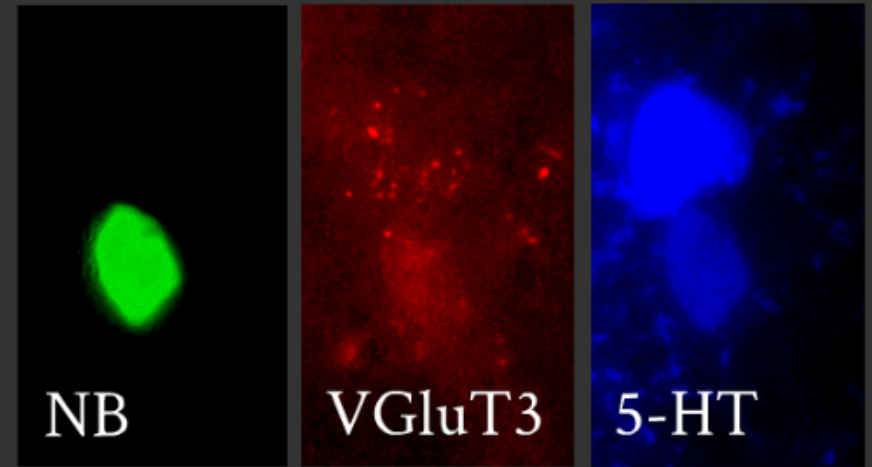
VGluT3(+)

NB = Neurobiotinnal feltöltött sejt

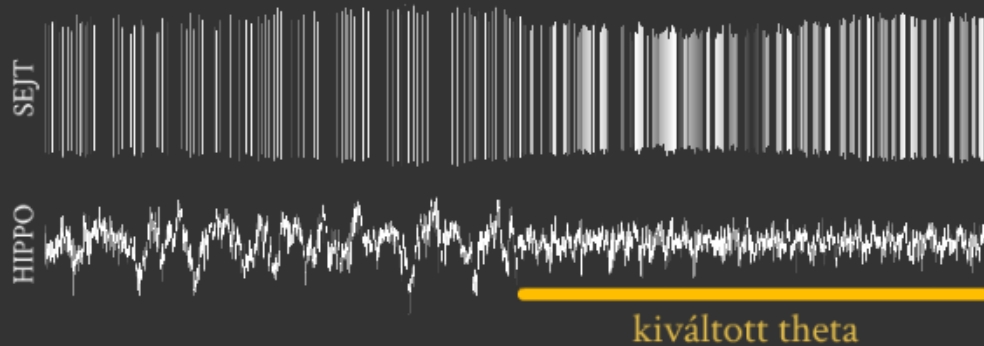


dupla pozitív

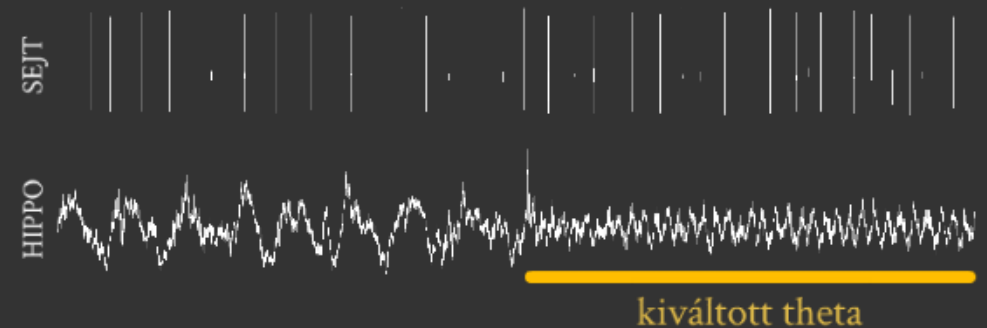
NB = Neurobiotinnal feltöltött sejt



JUXTACELLULÁRIS REGISZTRÁTUM



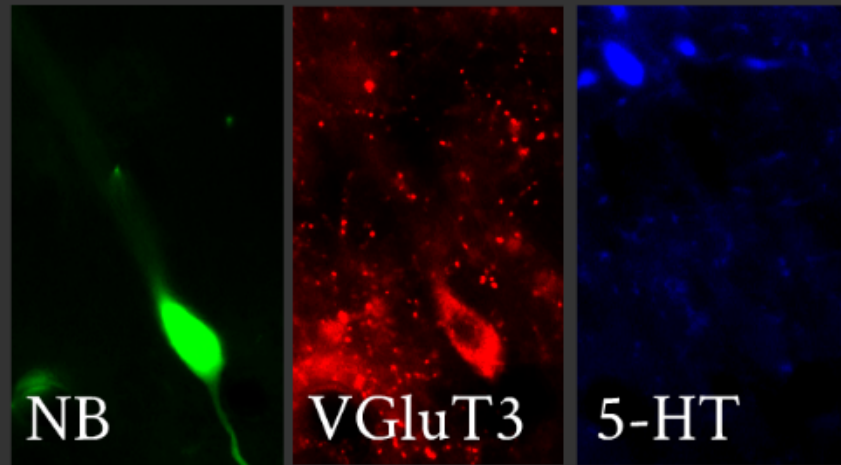
JUXTACELLULÁRIS REGISZTRÁTUM



2 s

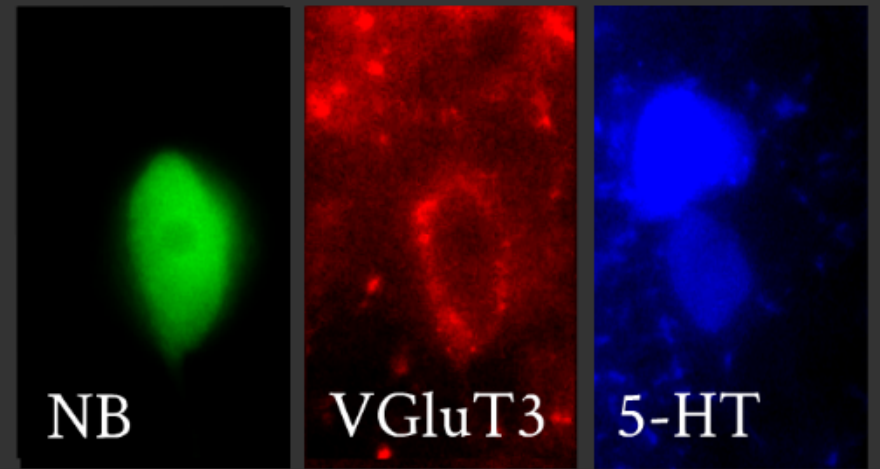
VGluT3(+)

NB = Neurobiotinnal feltöltött sejt

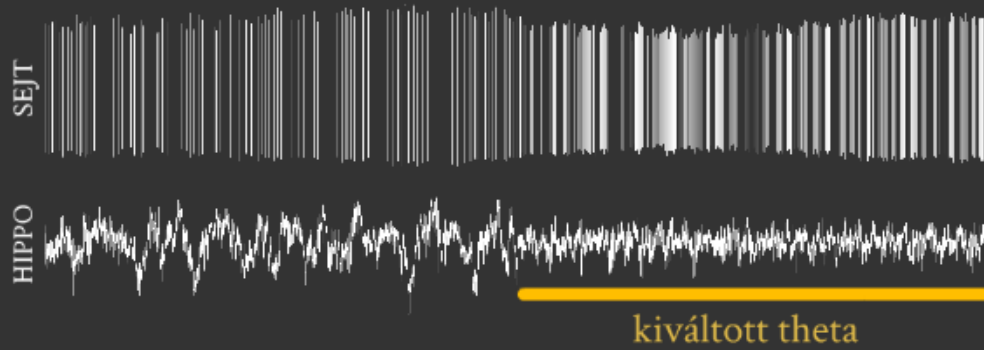


dupla pozitív

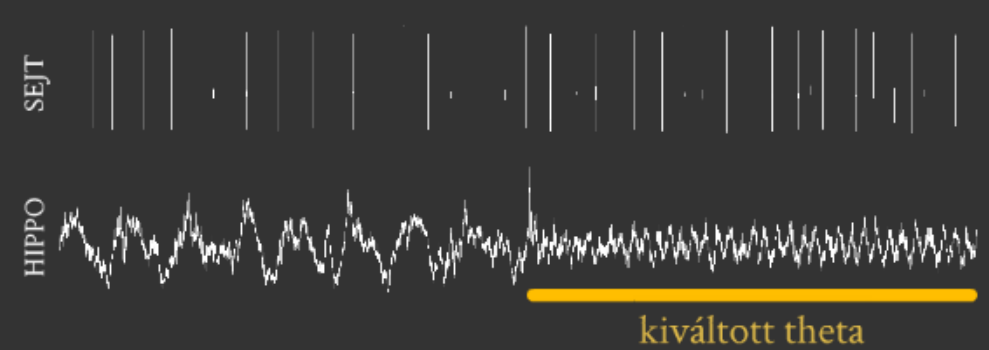
NB = Neurobiotinnal feltöltött sejt



JUXTACELLULÁRIS REGISZTRÁTUM



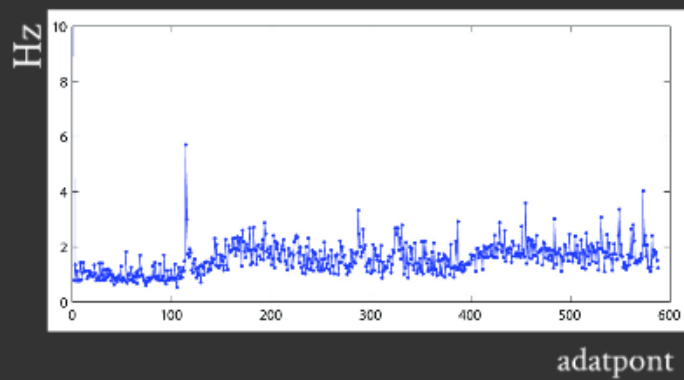
JUXTACELLULÁRIS REGISZTRÁTUM



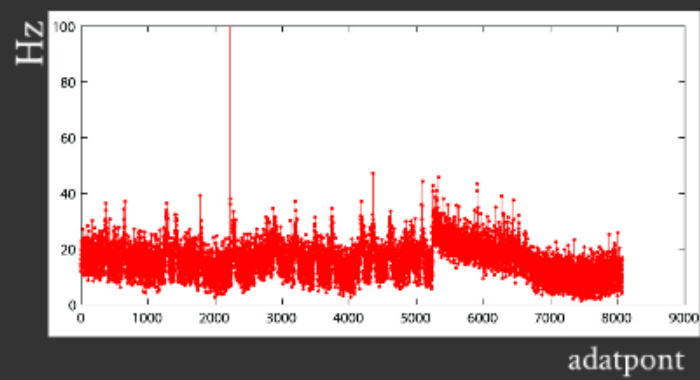
2 s

instant frekvencia = $1/\text{interspike interval}$

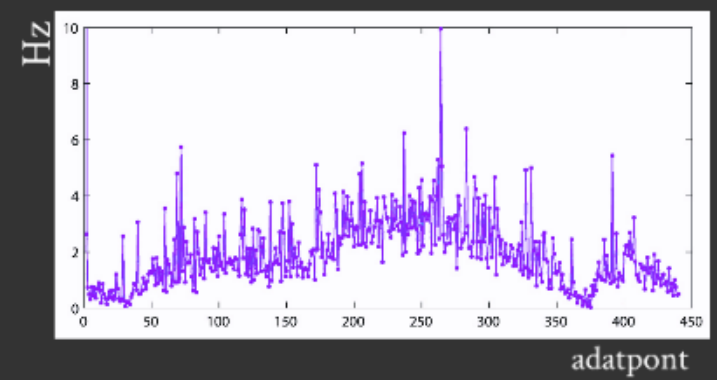
5-HT(+)



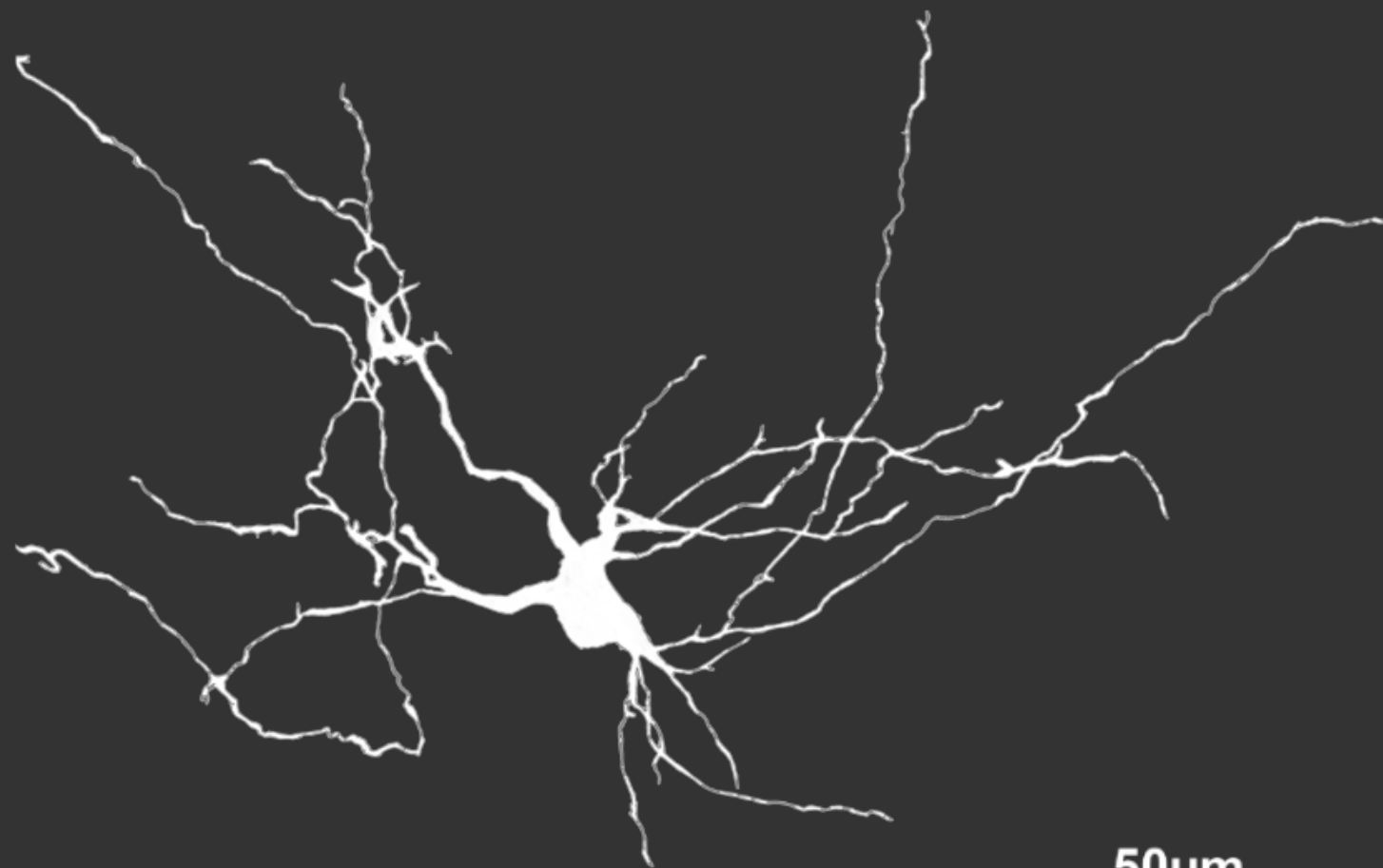
VGluT3(+)



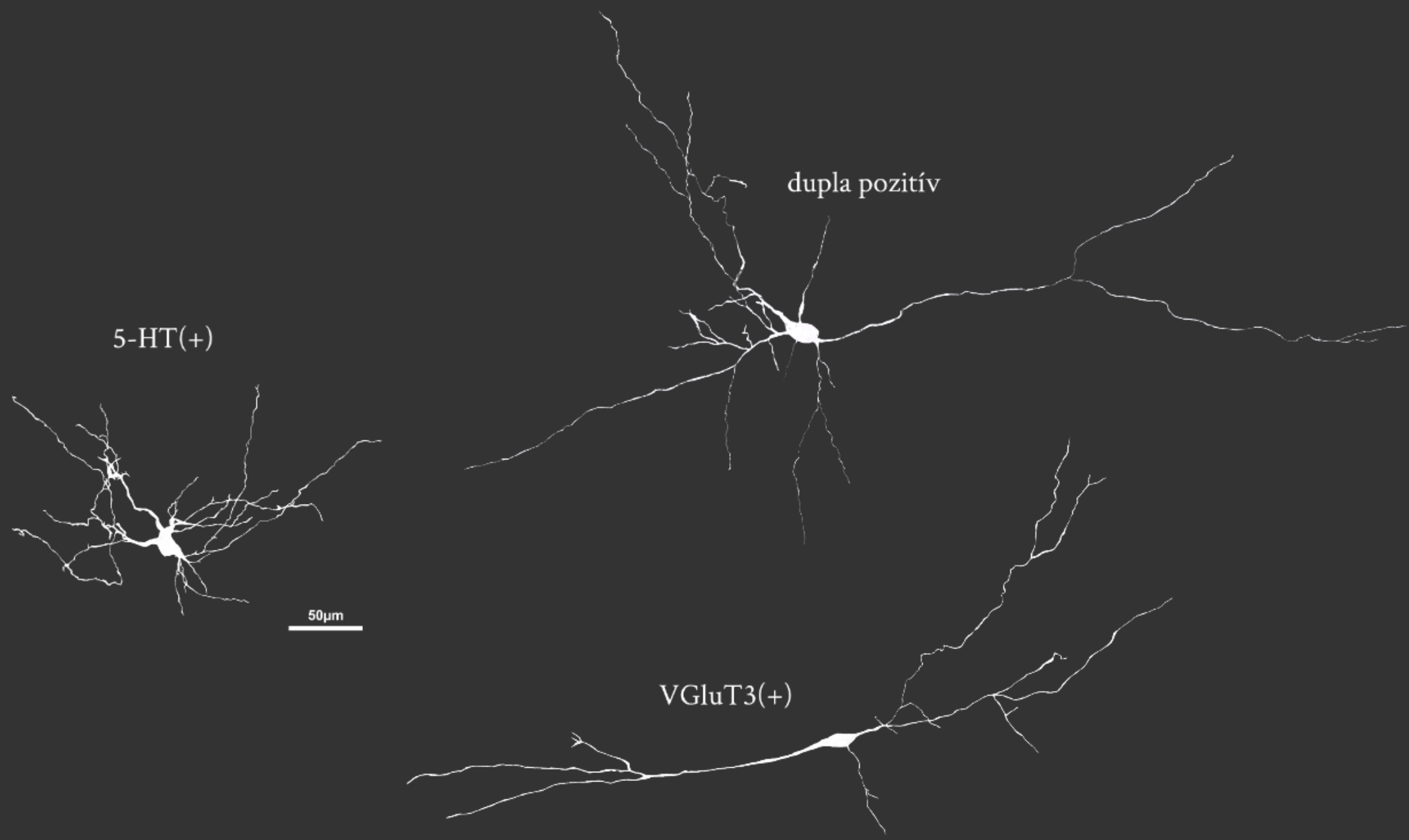
dupla pozitív



5-HT(+)



50μm

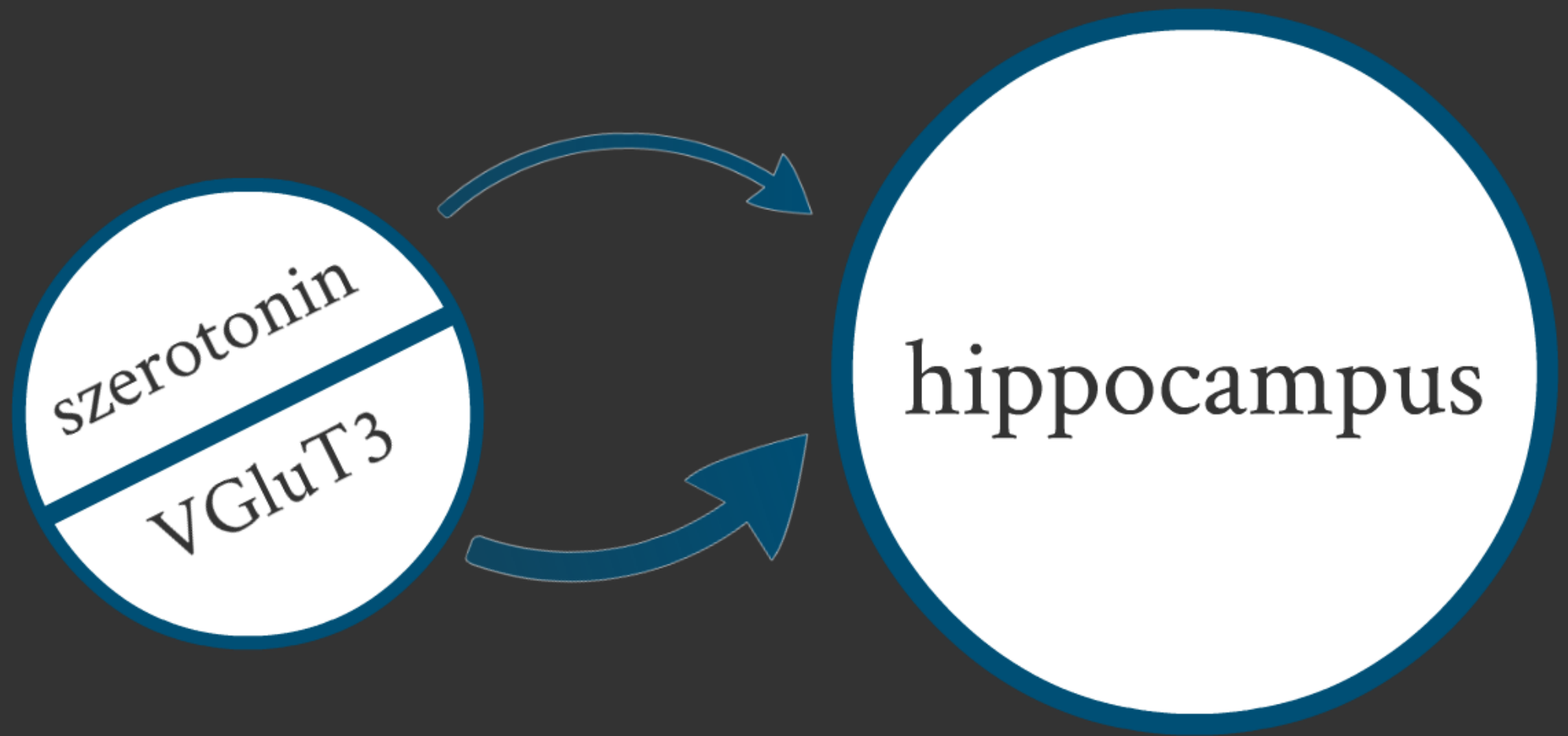


5-HT(+)

dupla pozitív

VGluT3(+)

50µm



Varga Viktor, Laszlovszky Tamás, Verebélyi Dorottya, Hangya Balázs, Nyiri Gábor, Borhegyi Zsolt, Freund Tamás

Köszönöm szépen a figyelmet!