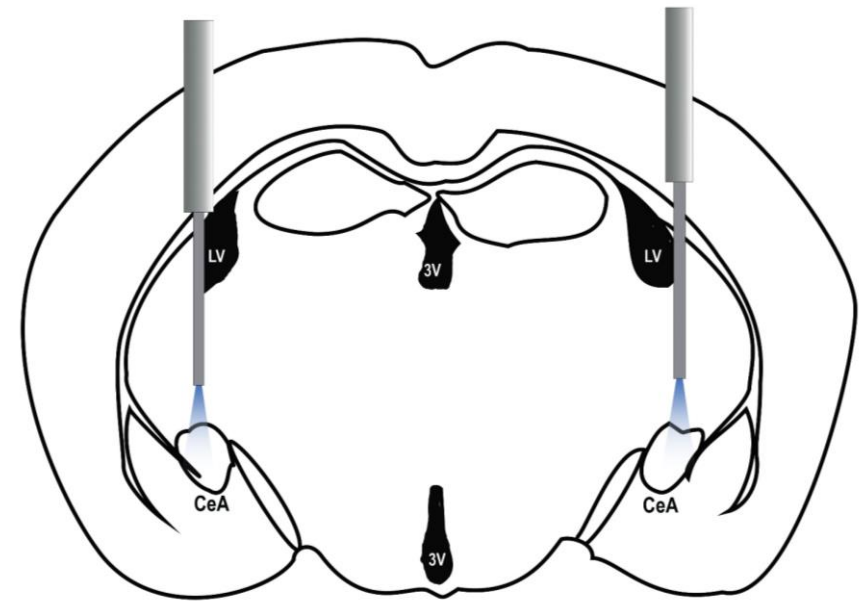
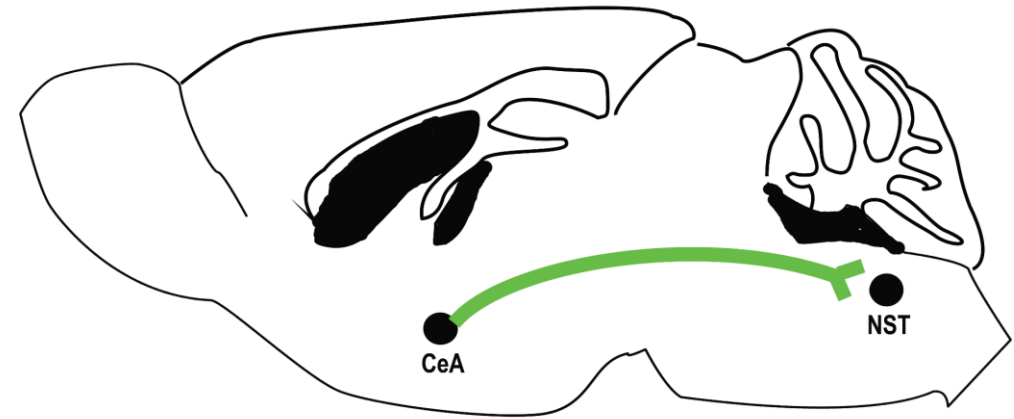


Synaptic connectivity of central amygdala Somatostatin neurons

Jane Bartonjo, Dr. Lundy Lab

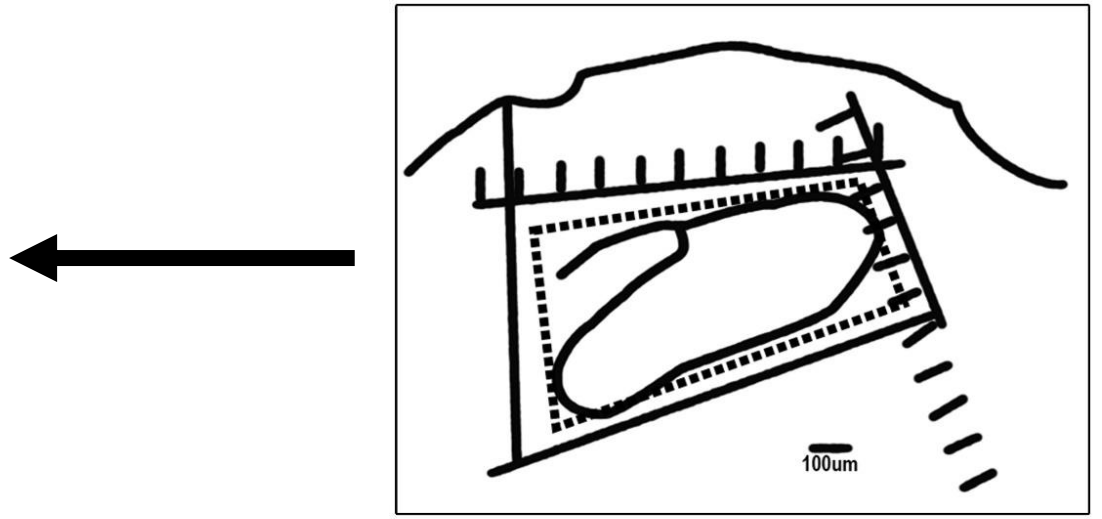
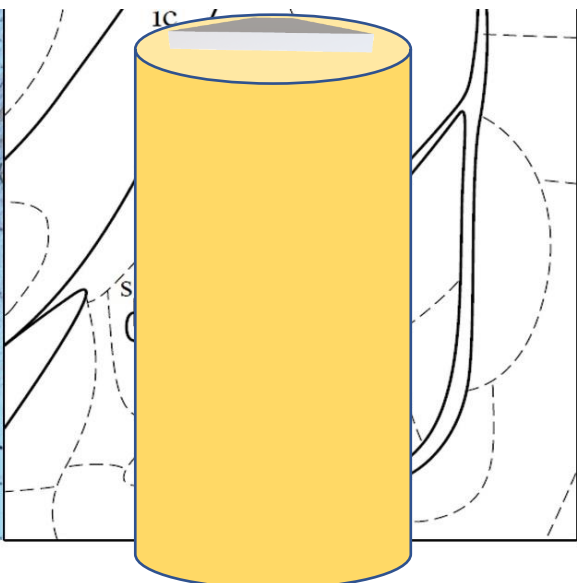
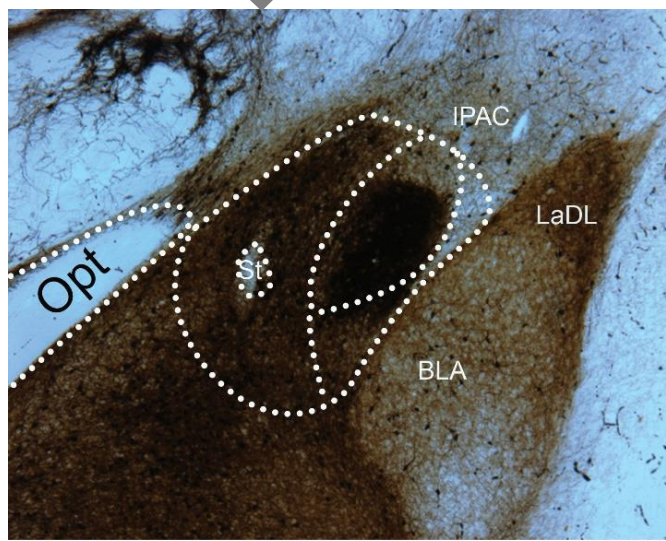
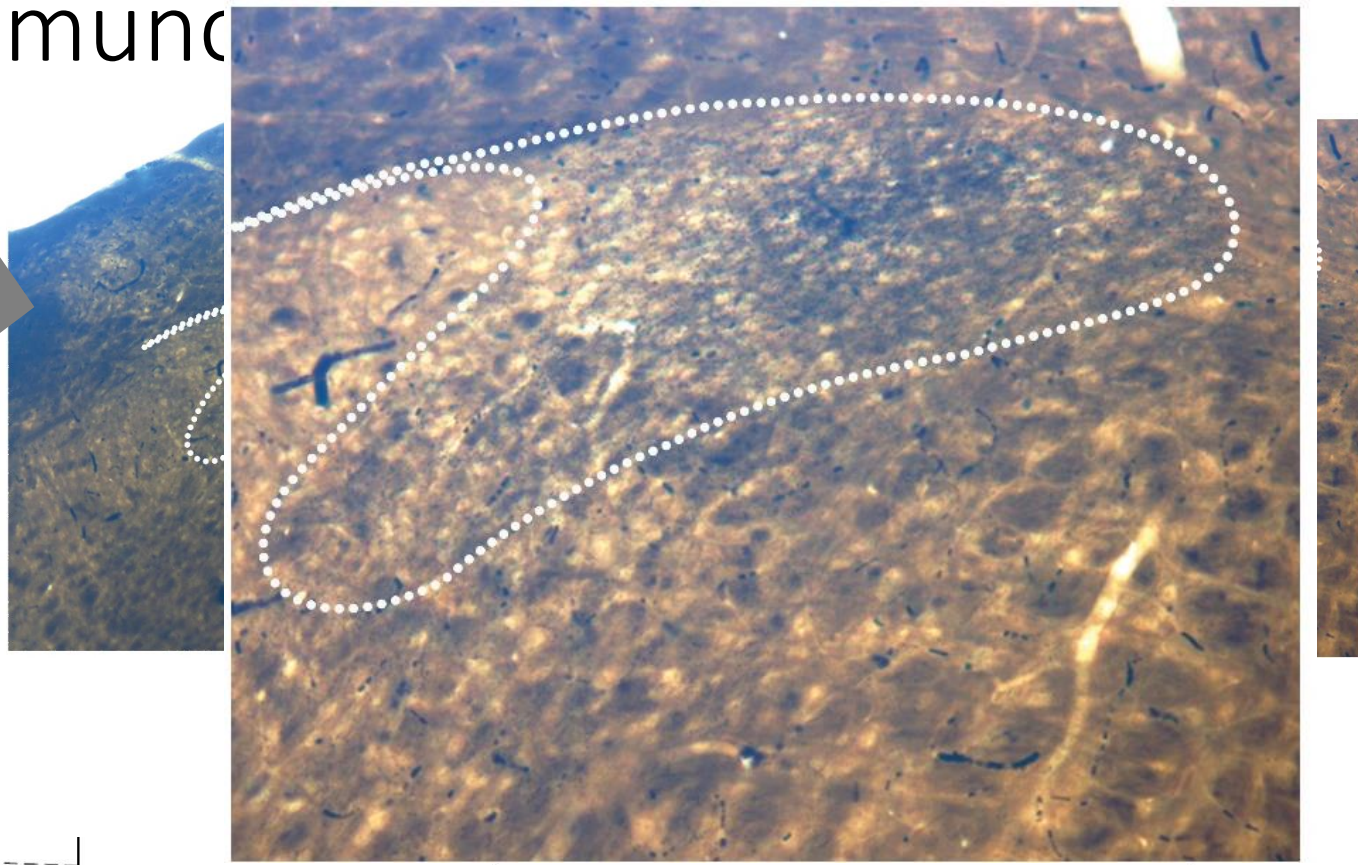
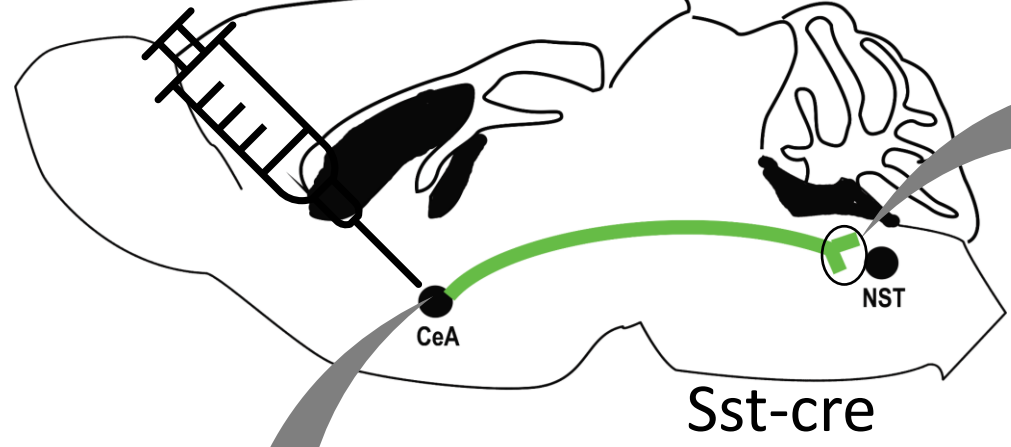
Background: Why TEM

- Central amygdala (CeA) somatostatin neurons projecting to the nucleus of Solitary tract (NST) Vs. ingestive behavior
- Optogenetic silencing = Increased intake of high concentration of quinine
- Synaptic connectivity?
- TEM provides required resolution



Methods: Tract tracing + immunocytochemistry

AAV9-DIO-dApex2



Data Analysis

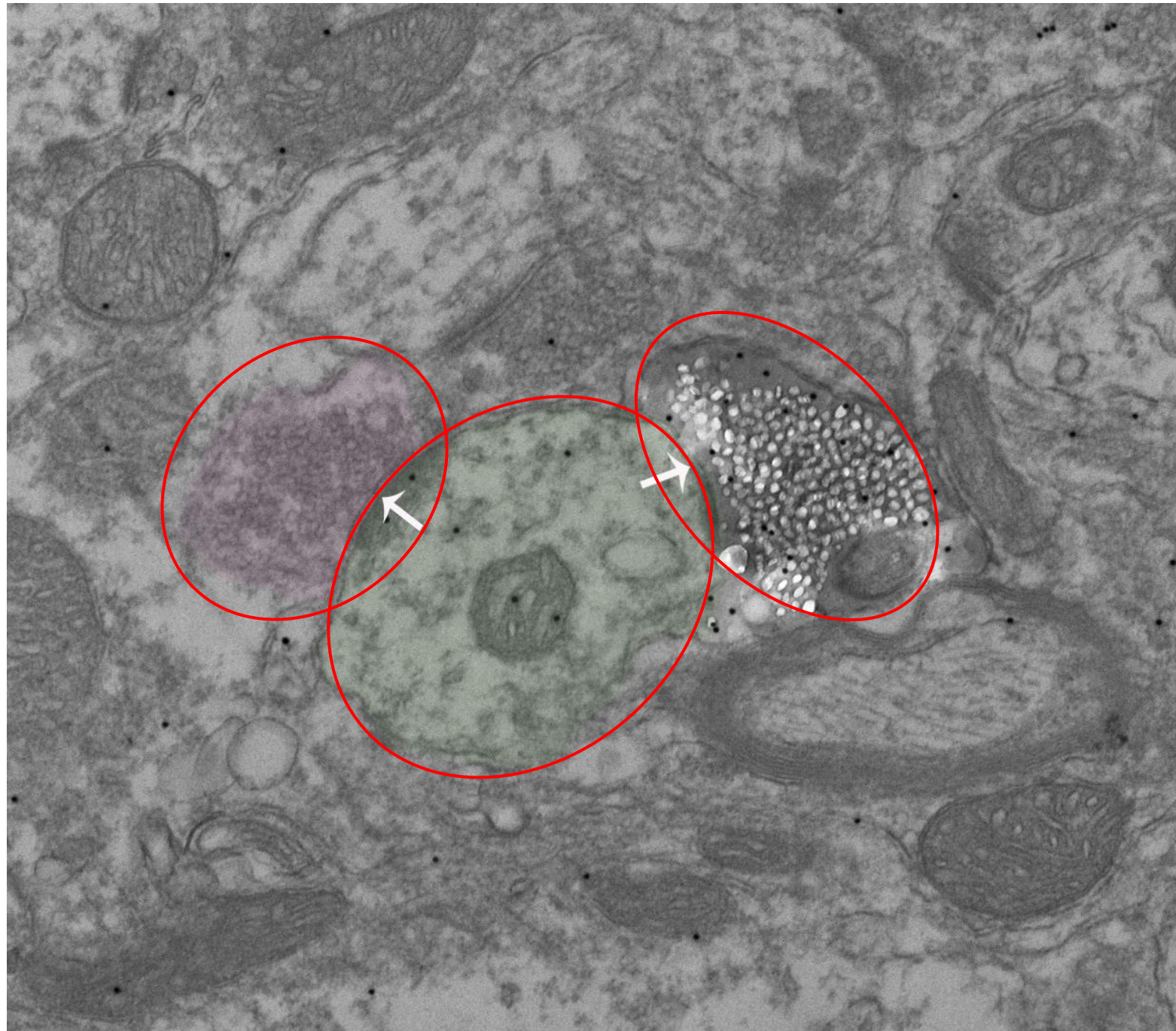
$$\text{Background} = \frac{\text{\#gold particles}}{\text{Area}}$$

GABA+ = 2SD above background

2SD: 14.13

Sst-terminal: 34.16
particles/ μm^2
(GABAergic/GABA⁺)

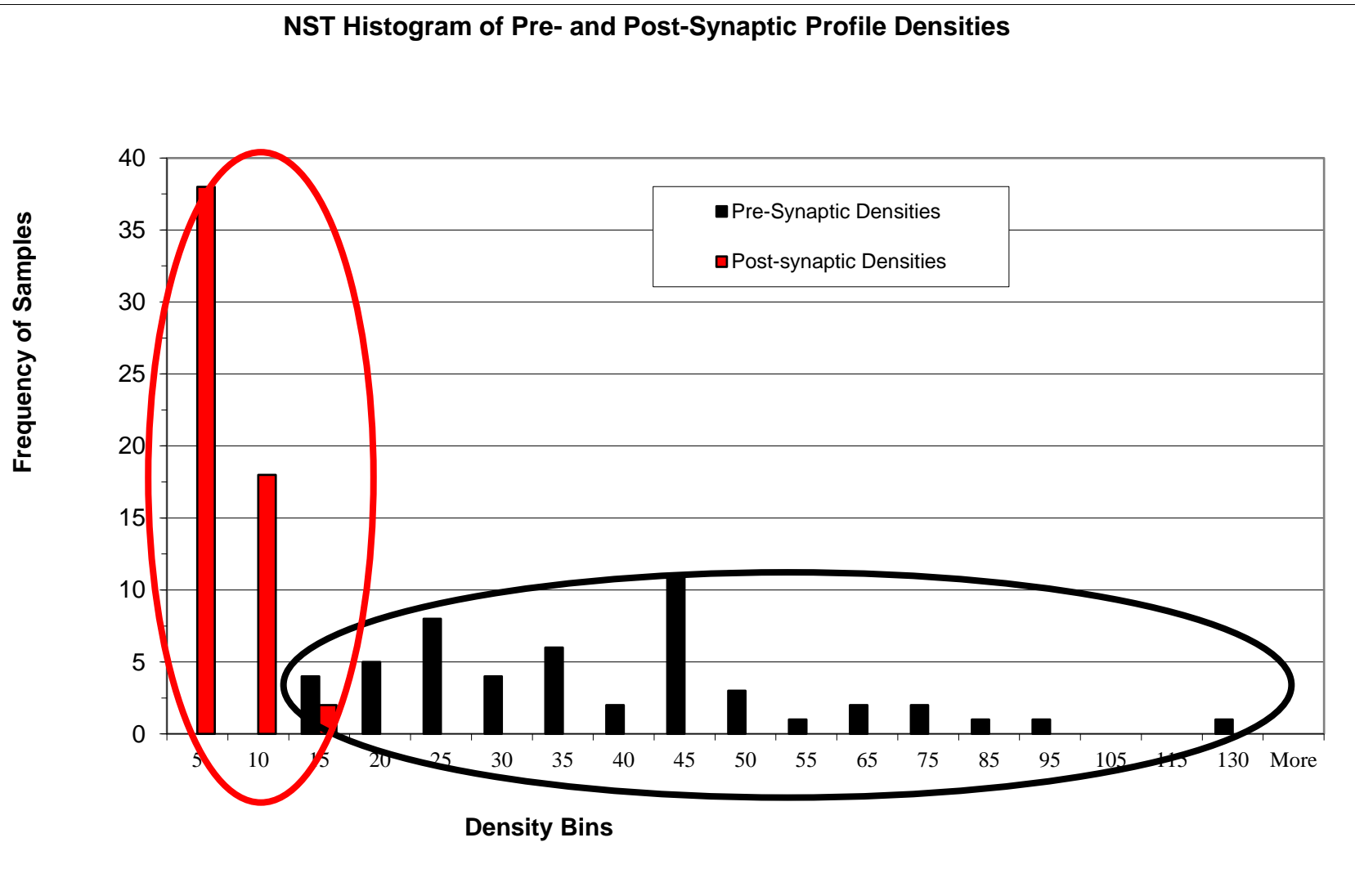
Post-synaptic cell: 5.39 (GABA⁻)



CeA somatostatin cells co-express GABA

>95% of SSt- terminals were GABA+

~100% post-synaptic targets GABAergic



Issues encountered: Ultrastructural loss

AAV2-DIO-EYFP



Immunoperoxidase

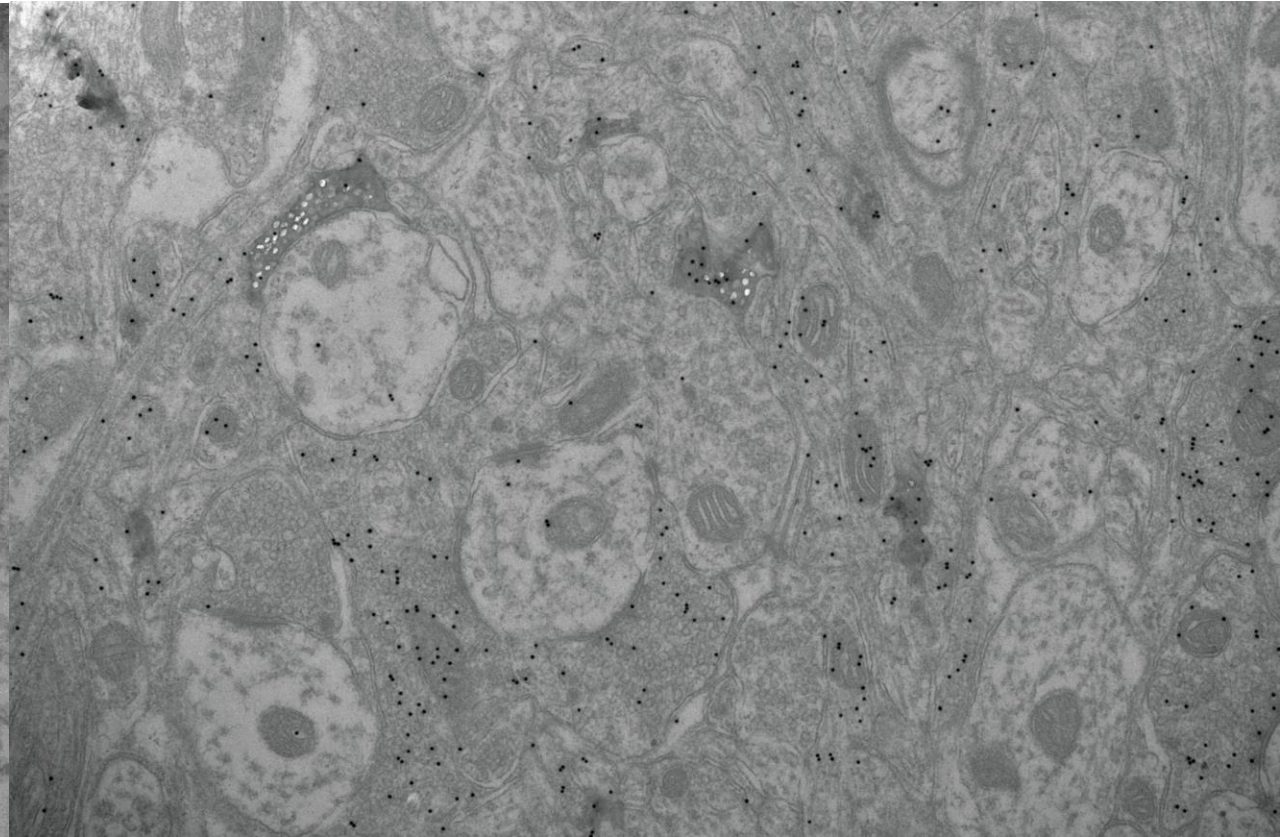
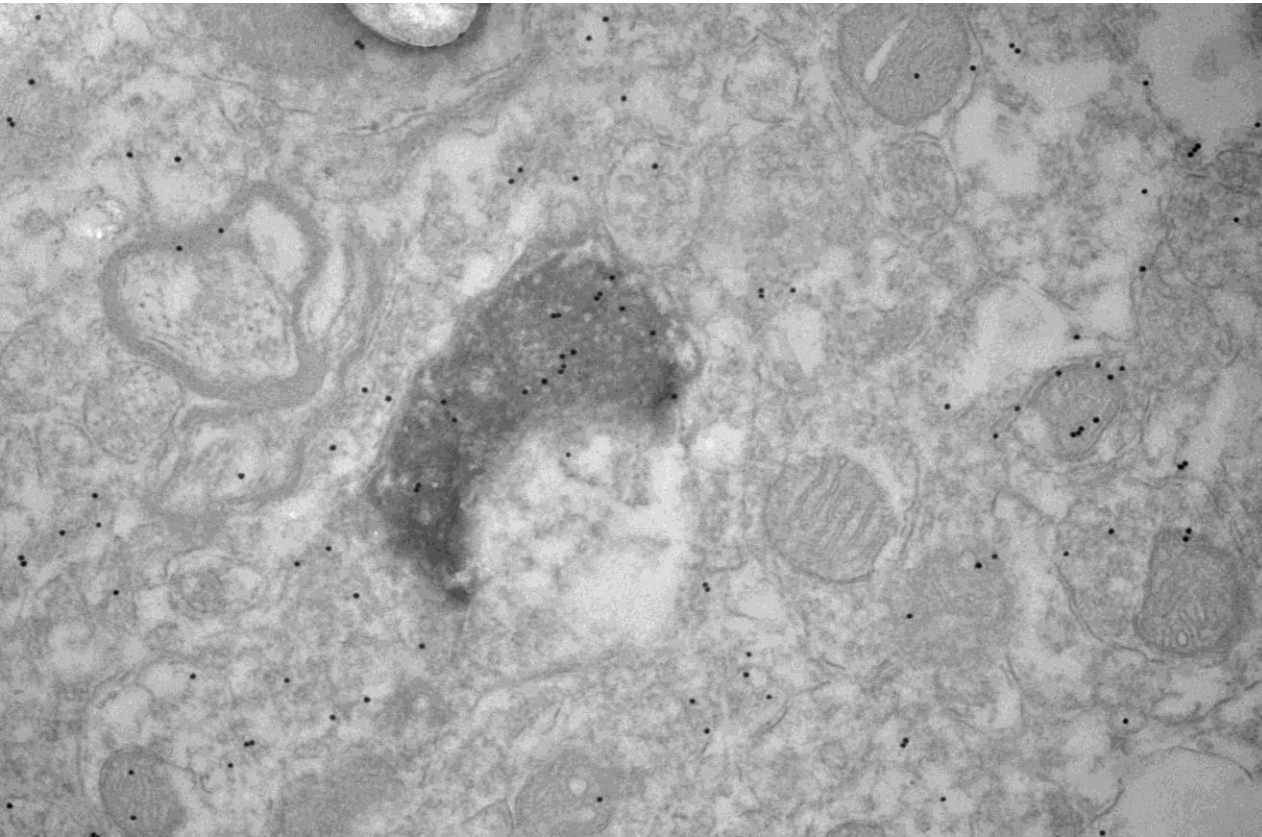


DAB substrate

AAV9-DIO-dApex



DAB Substrate



Questions