



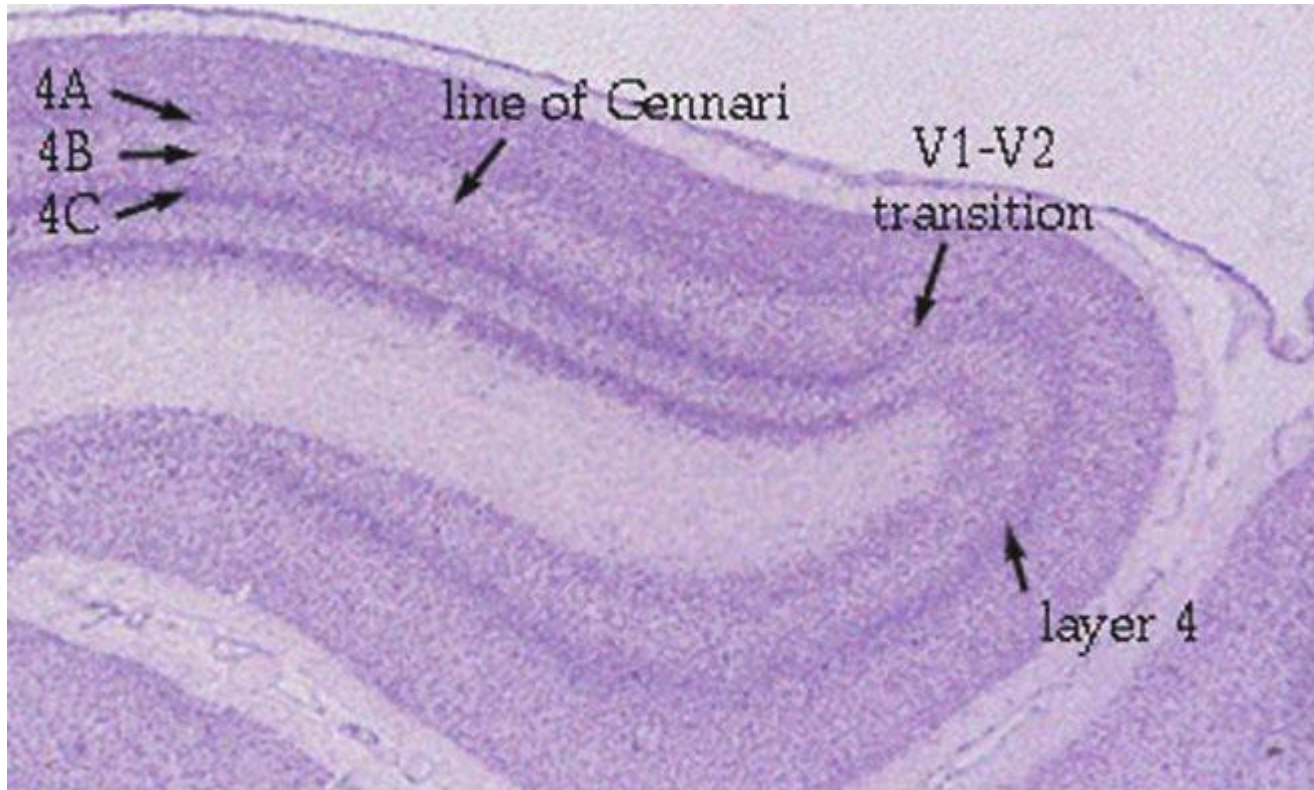
# Cytoarchitecture and Connections in the CNS

*Tsamis Konstantinos*

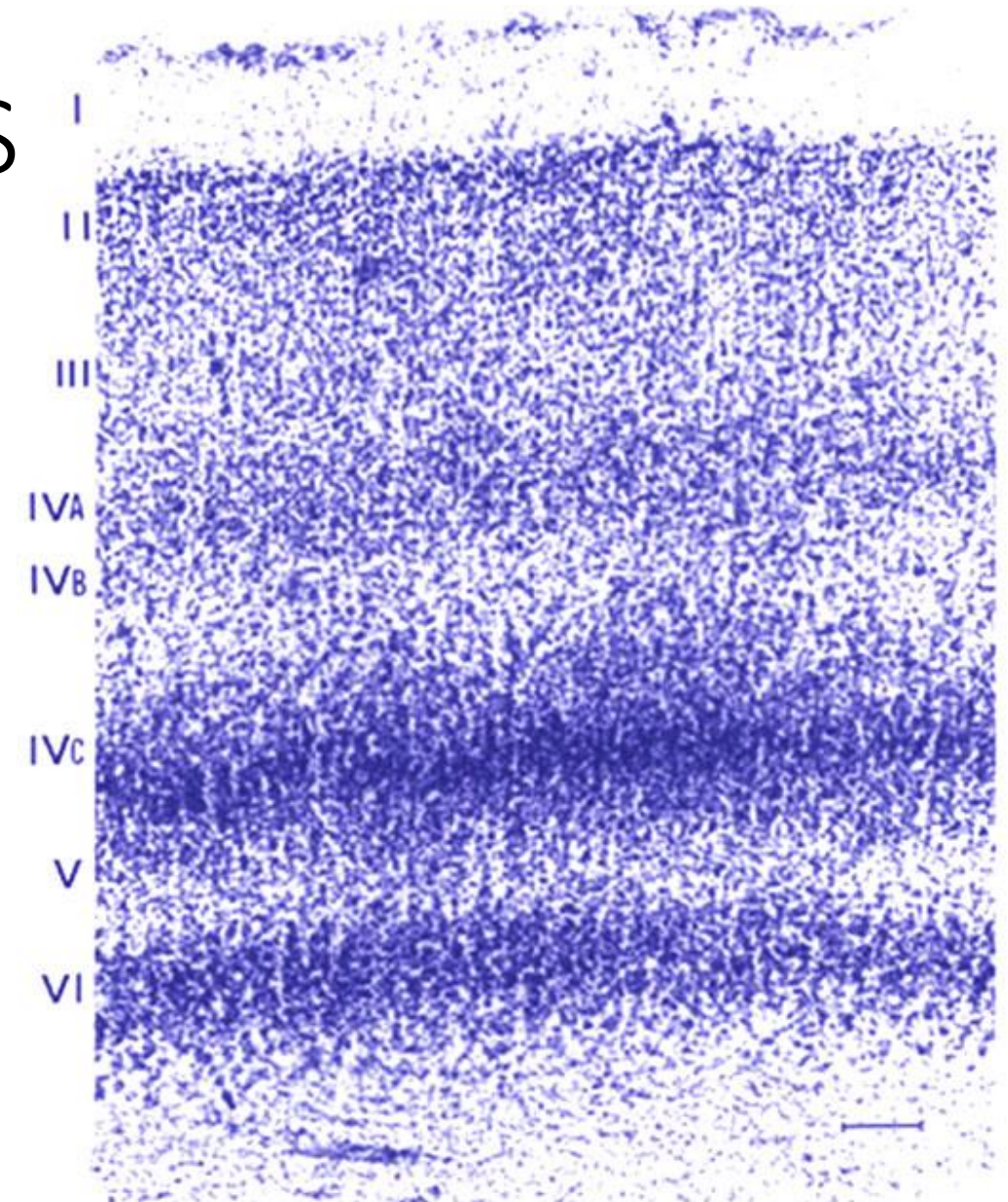
*MD, PhD*



# Cytoarchitecture in the CNS

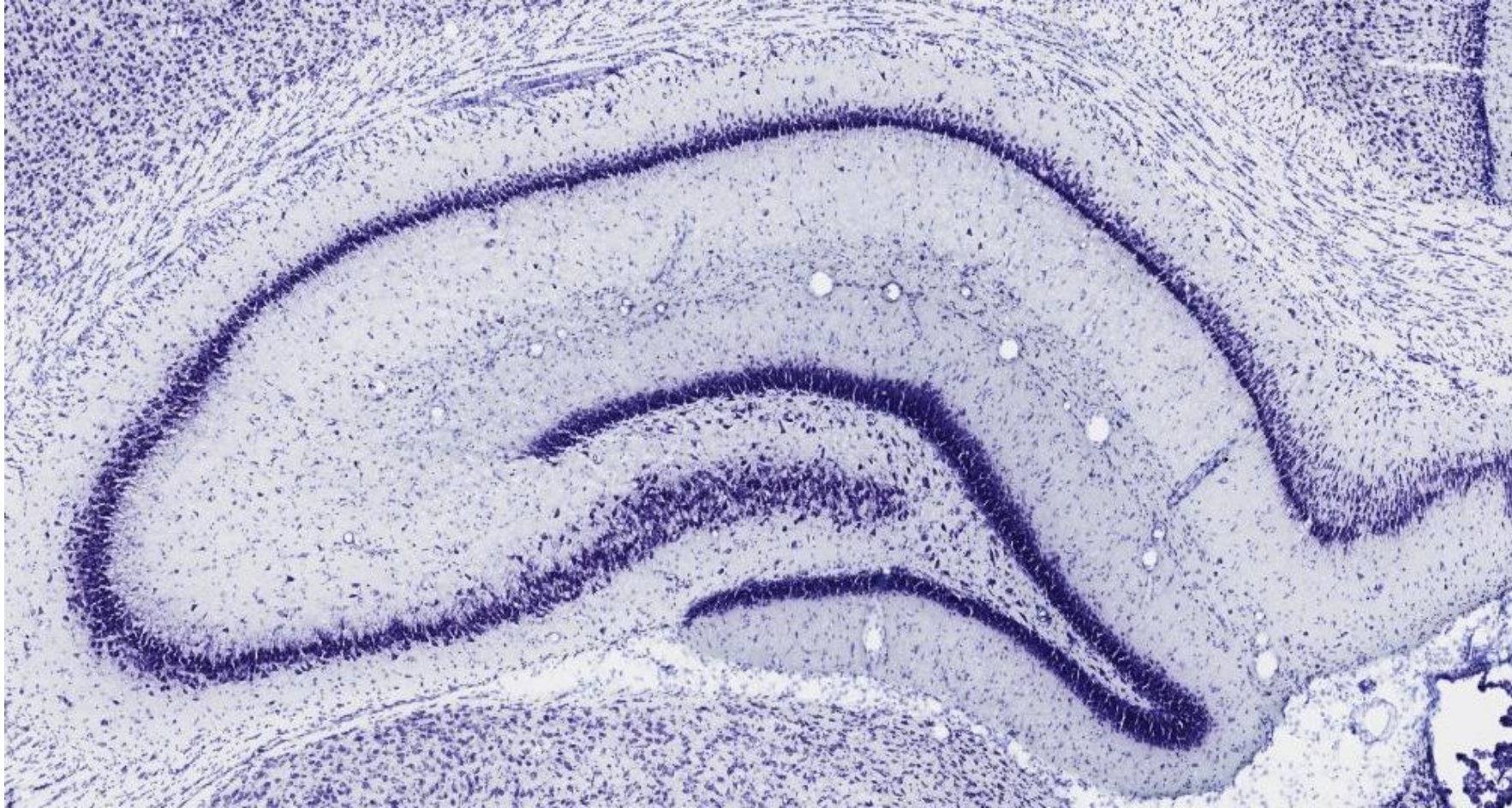


*Nissl stain – Visual cortex*





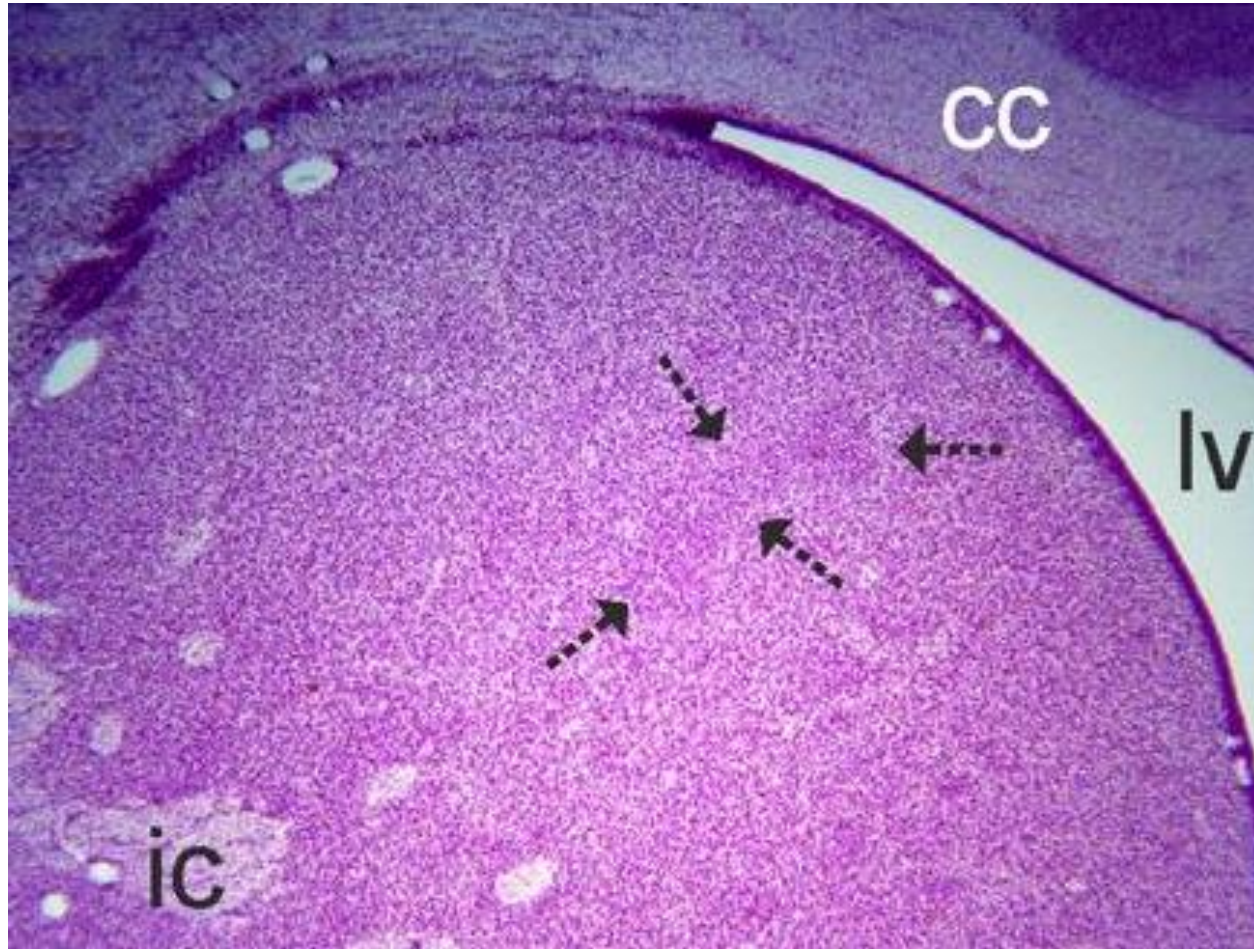
# Cytoarchitecture in the CNS



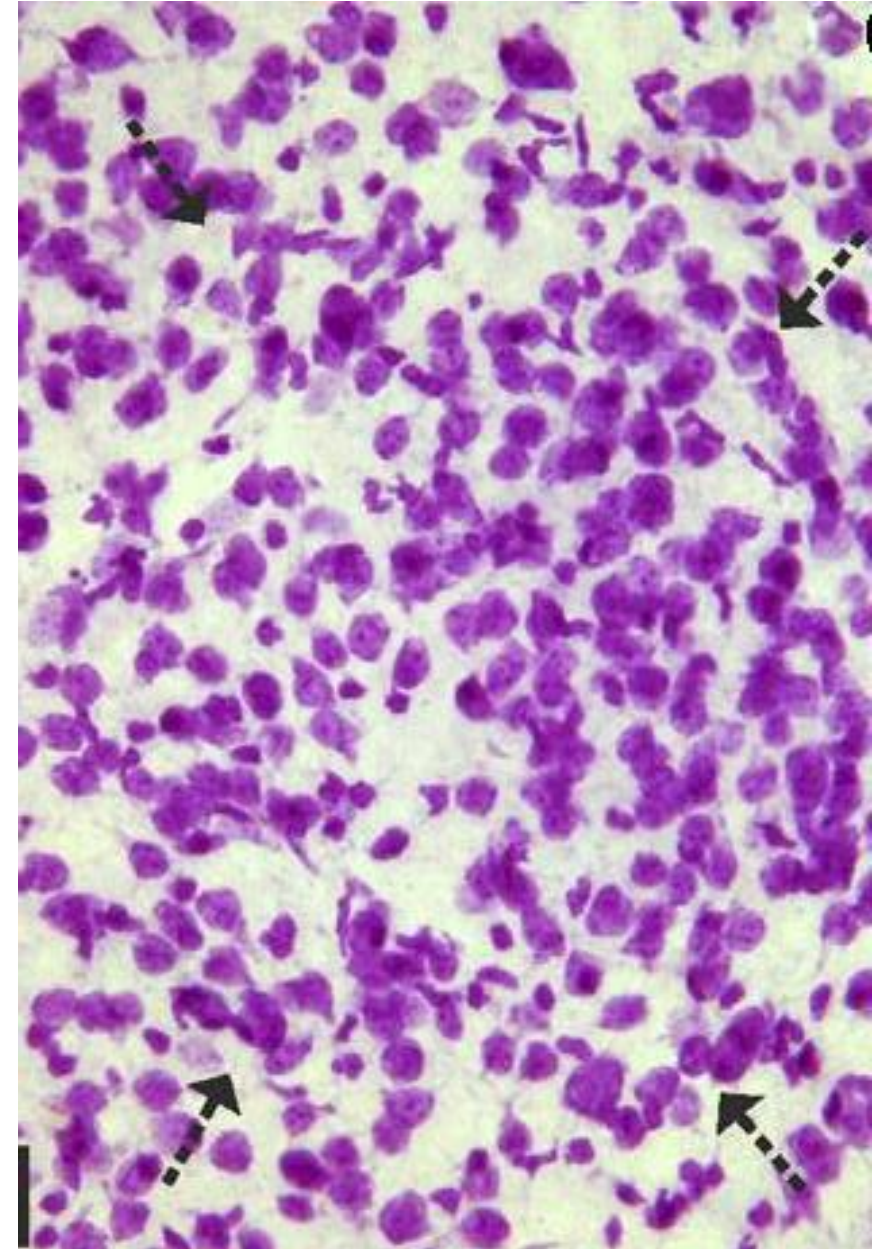
*Nissl stain – Hippocampus*



# Cytoarchitecture in the CNS

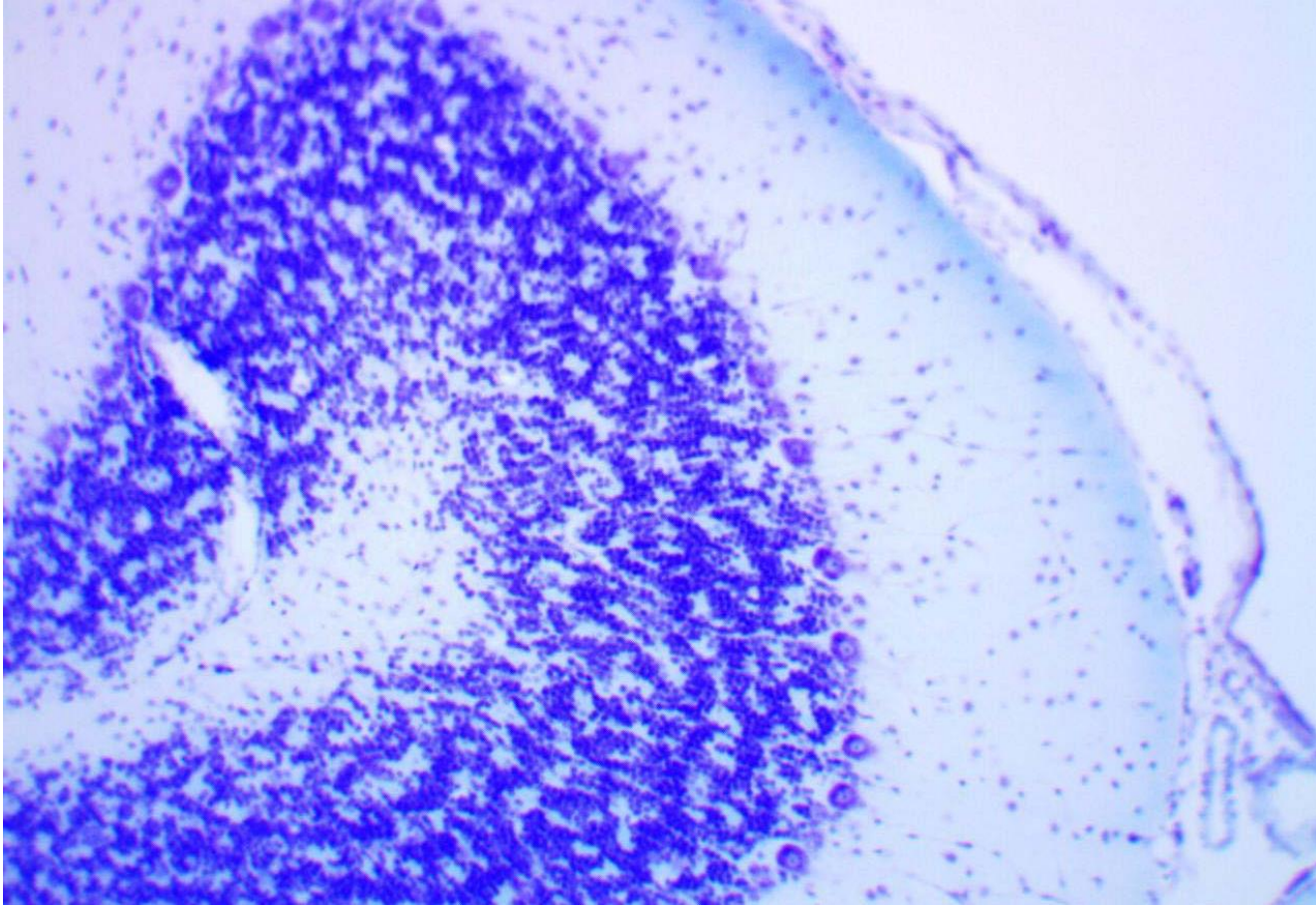


*Nissl stain – Neostriatum*

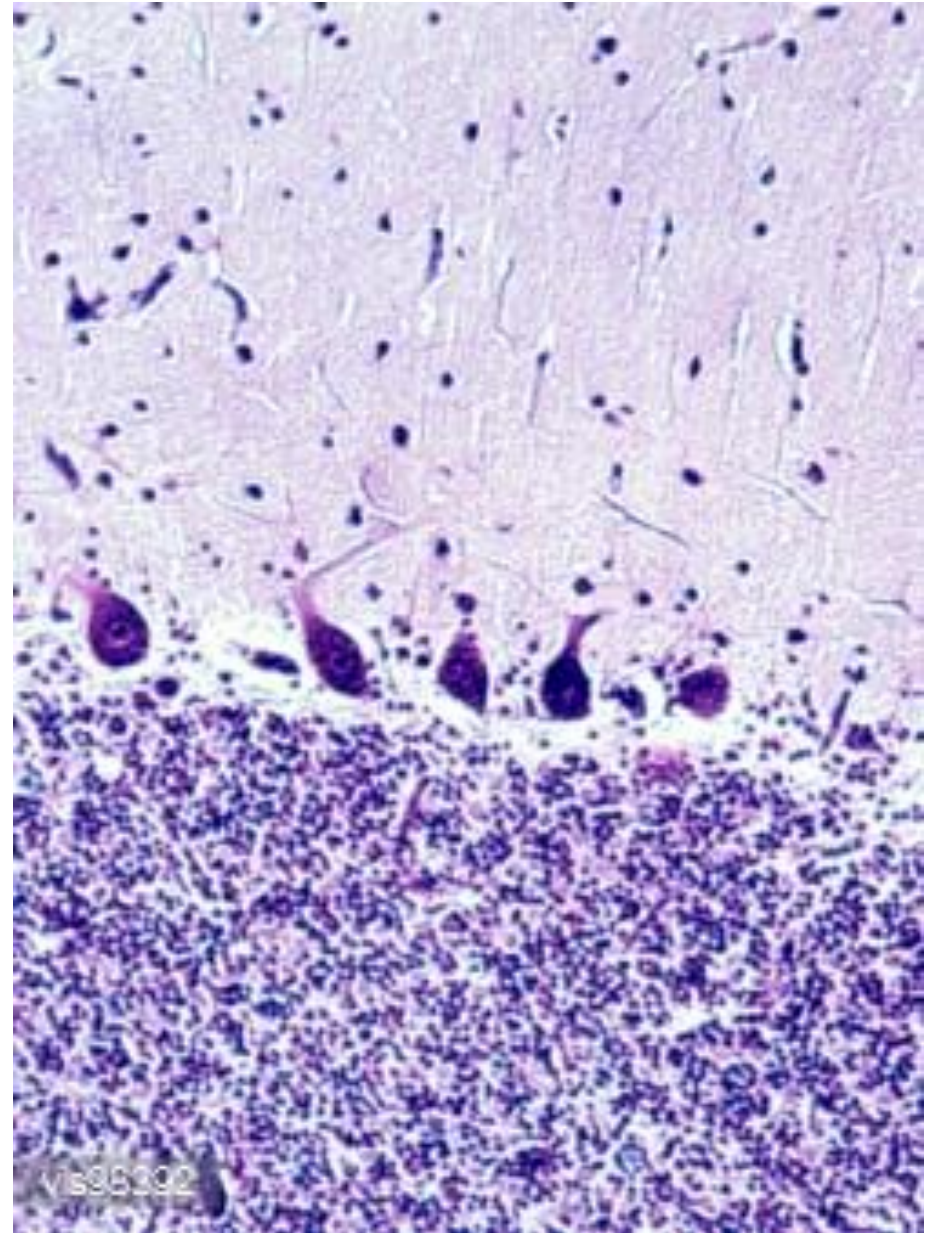




# Cytoarchitecture in the CNS

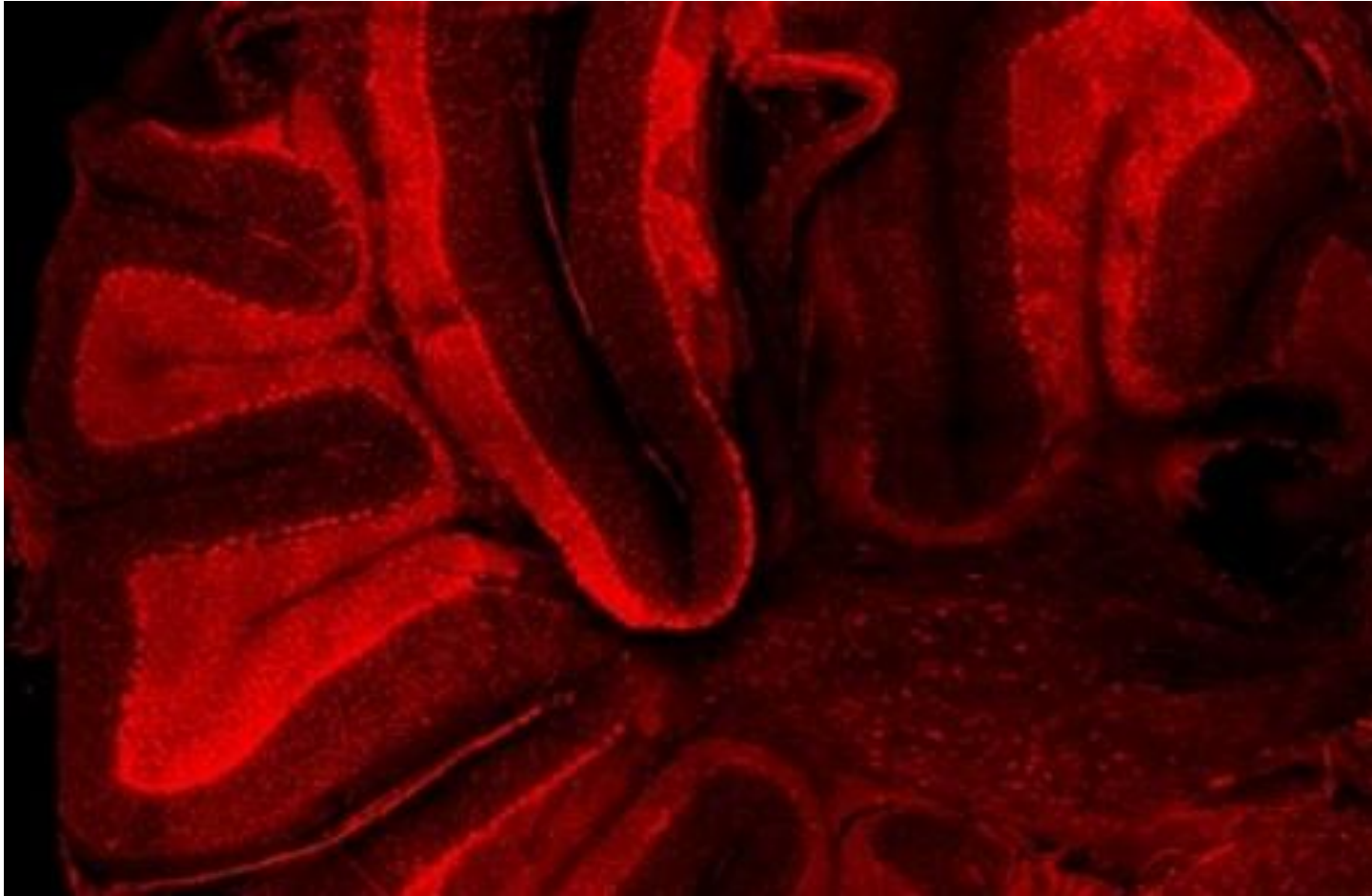


*Nissl stain – Cerebellar cortex*

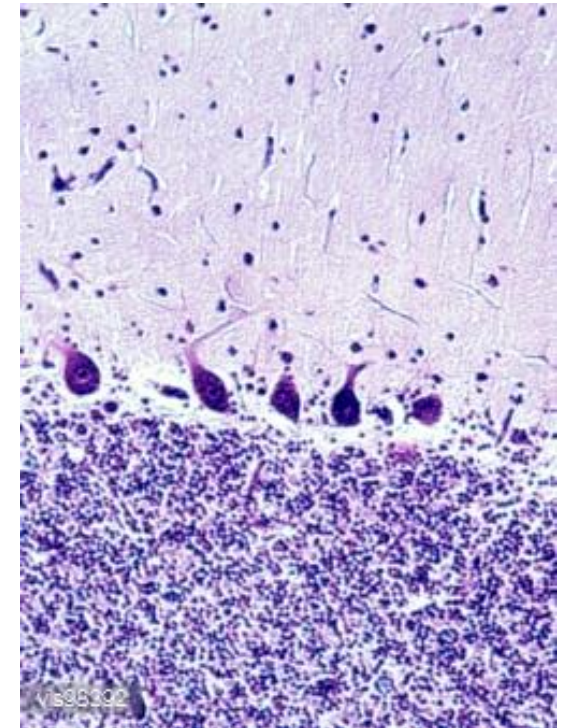
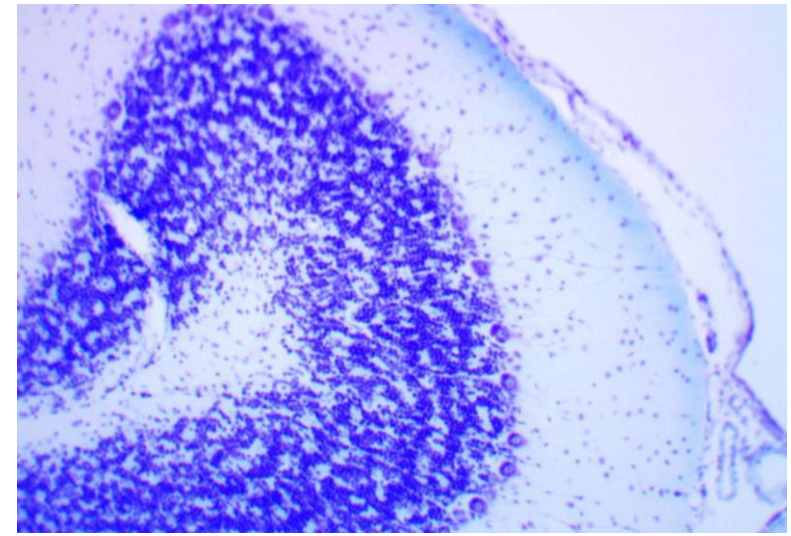


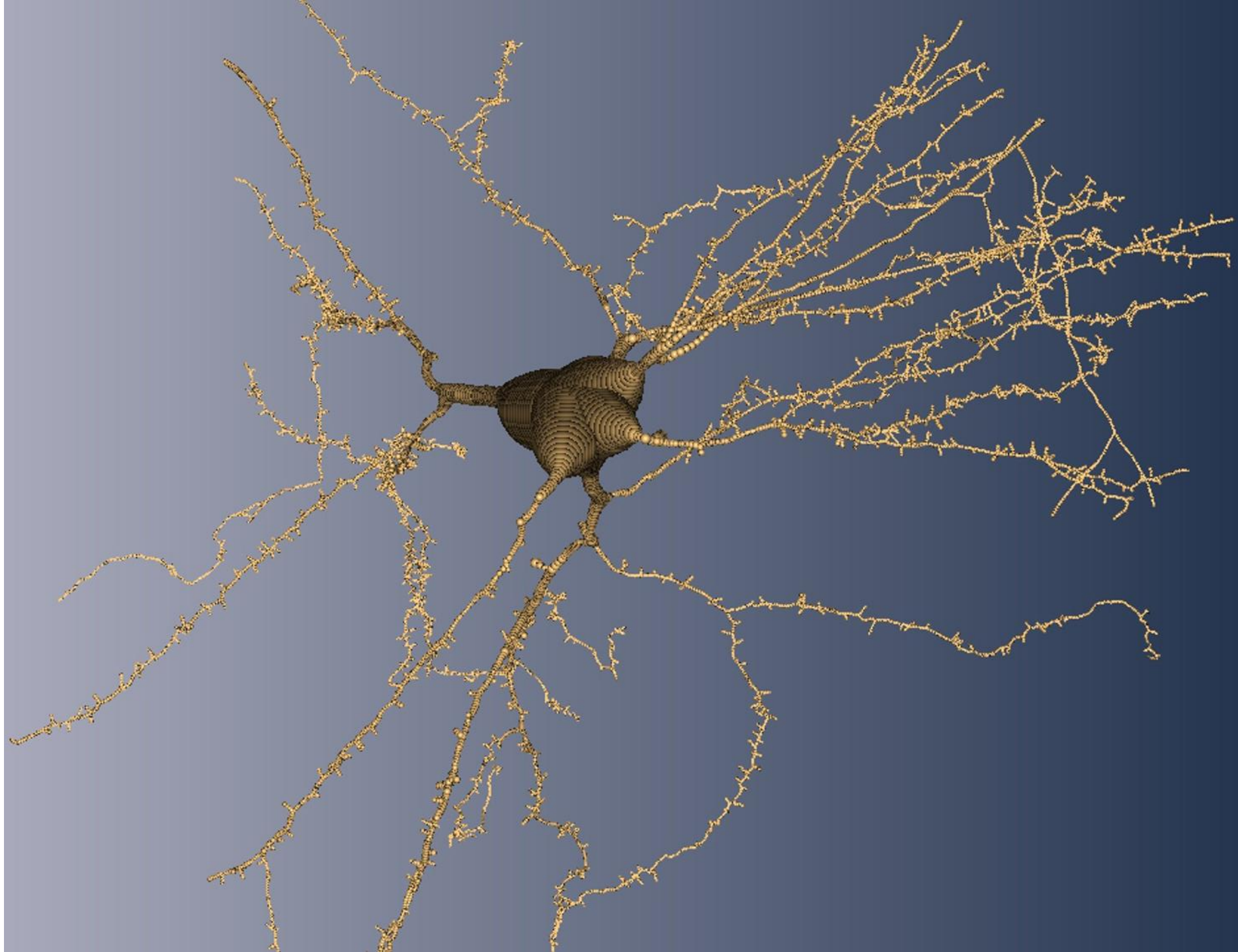


# Cytoarchitecture in the CNS



*Nissl stain – Cerebellar cortex*







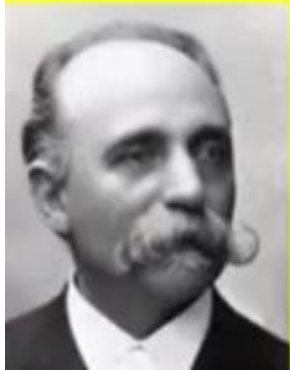
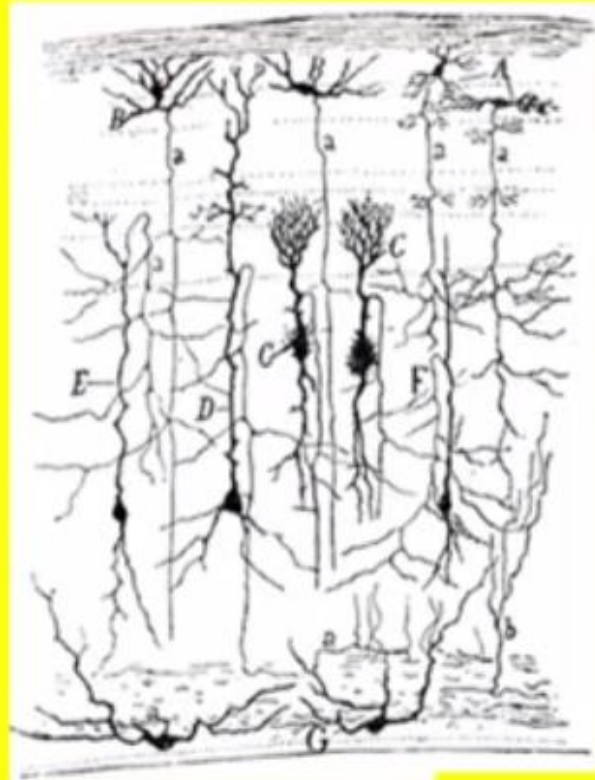


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# Beginning of Modern Neuroscience – Cellular Anatomy

**The two giants:** Camillo Golgi (Italy) & S. Ramon Y Cajal (Spain) – Nobel Prize 1906

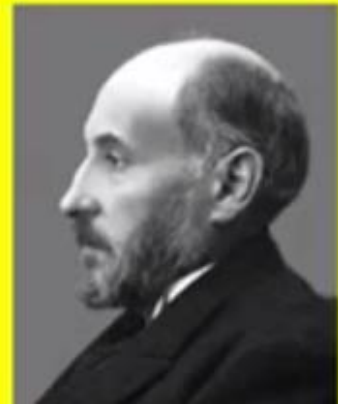


Camillo Golgi

Using Golgi staining method  
**Very small % of cells stained**  
Connections (synapses) - not seen

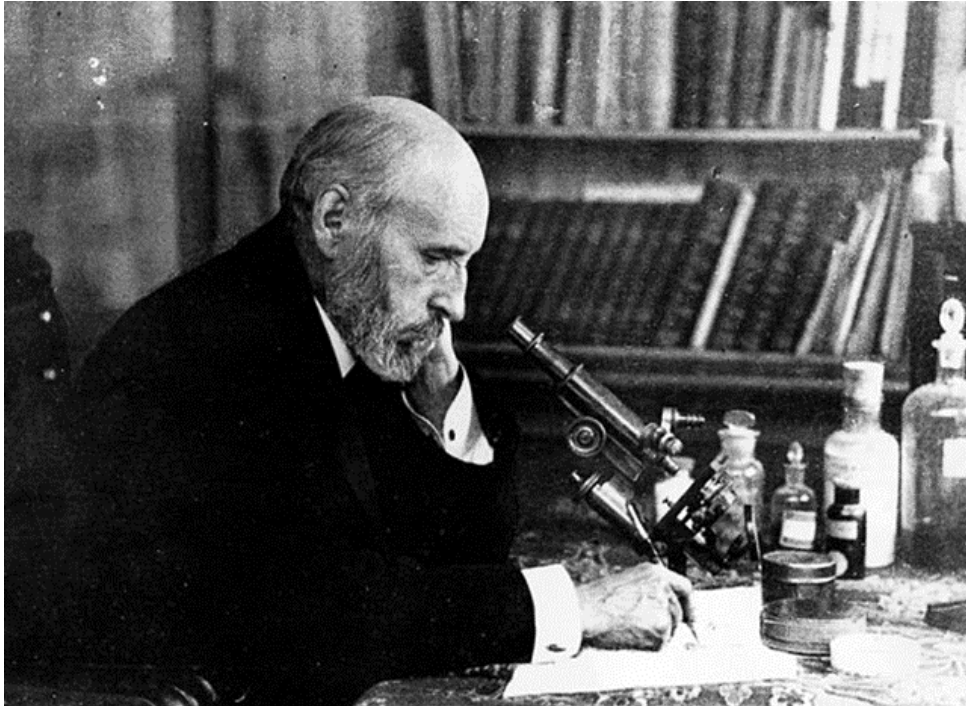
**The neuron doctrine** (Cajal)  
Our brain is built from individual cells

S. Ramon Y Cajal

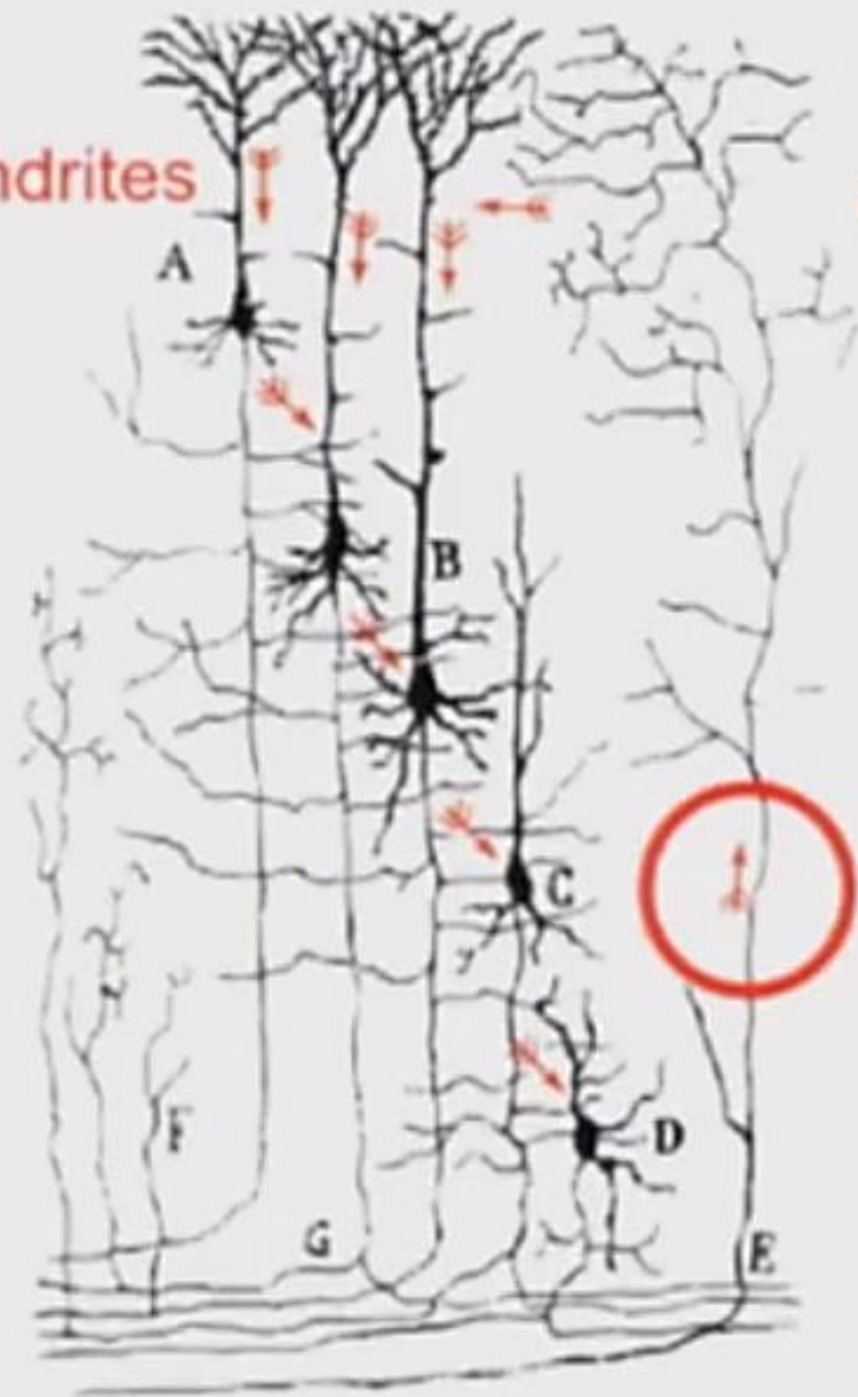




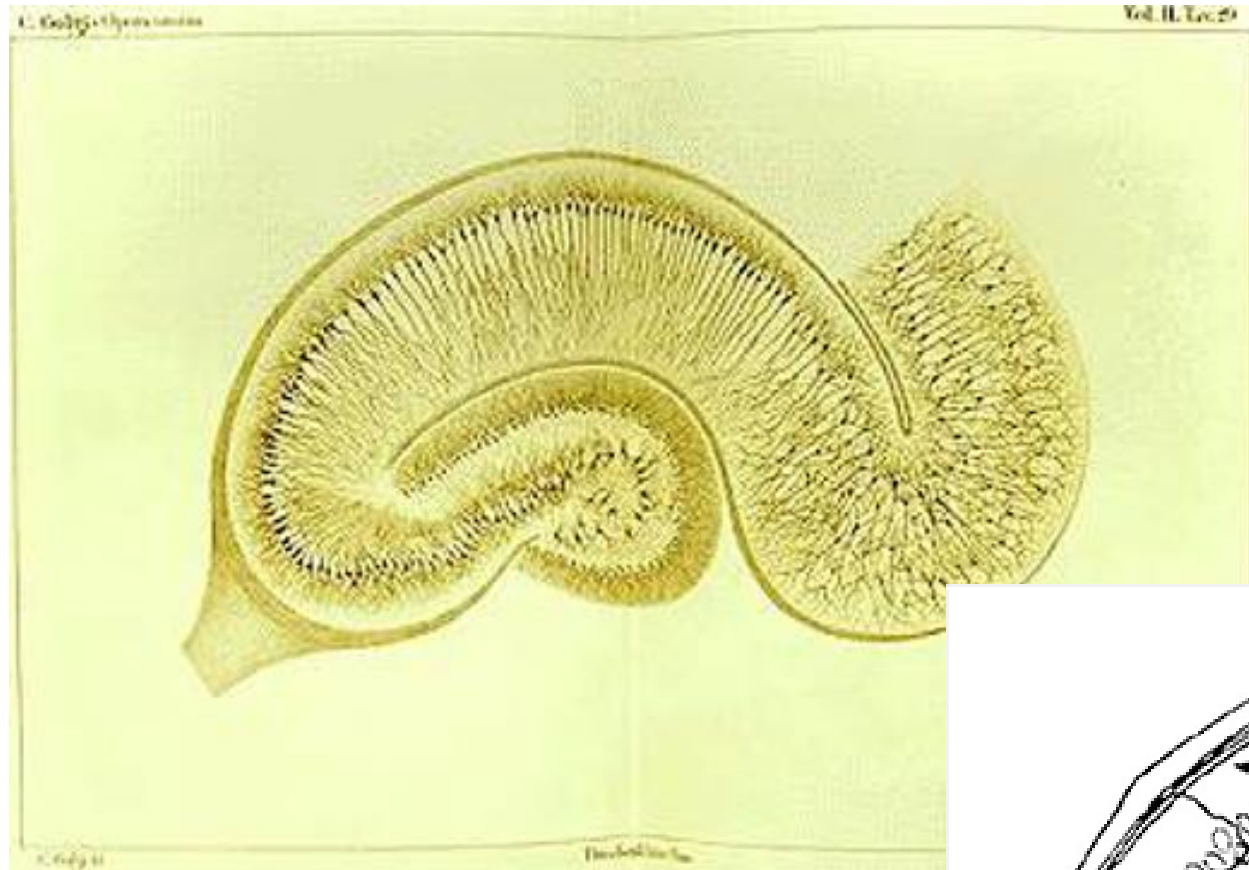
## *Ramon Y Cajal*



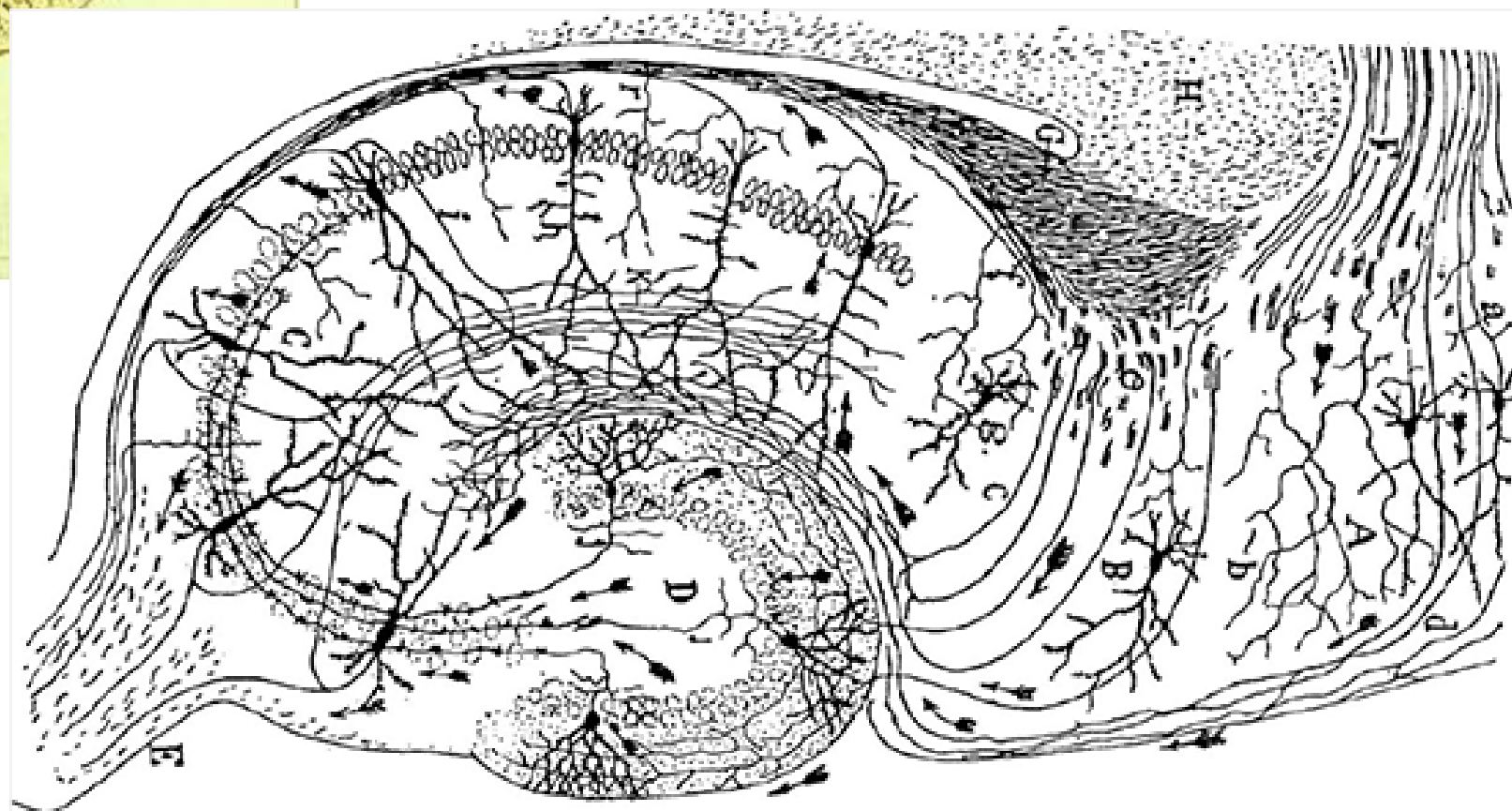
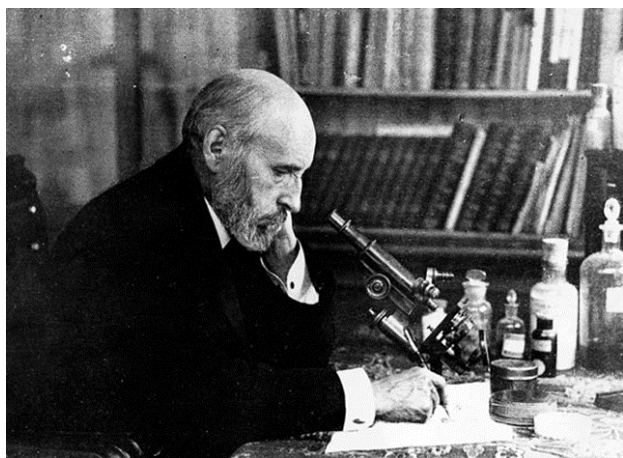
dendrites axon







## *Ramon Y Cajal*







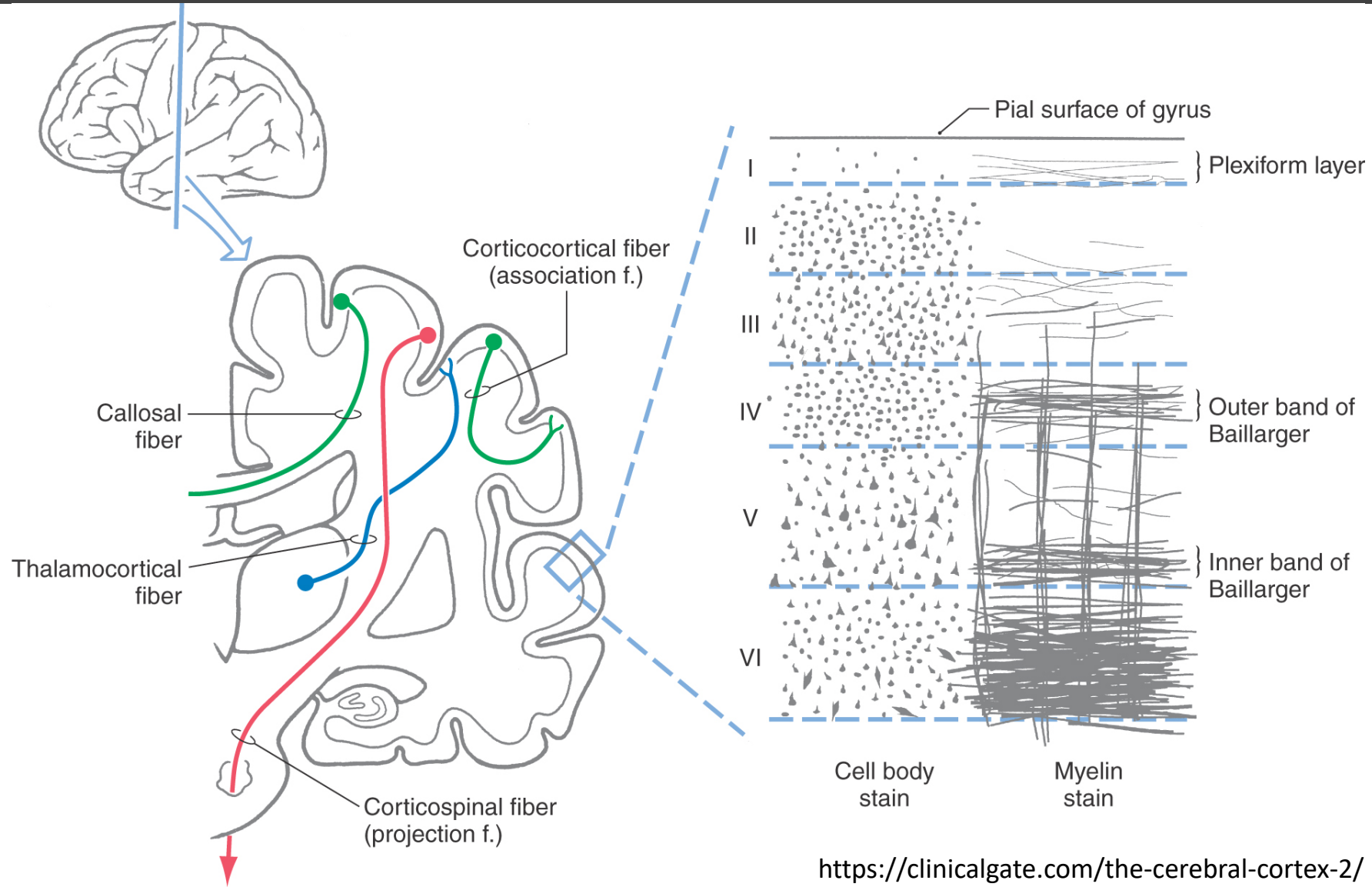


# Cytoarchitecture and Connections

- Neocortex
- Hippocampus
- Neostriatum
- Cerebellum

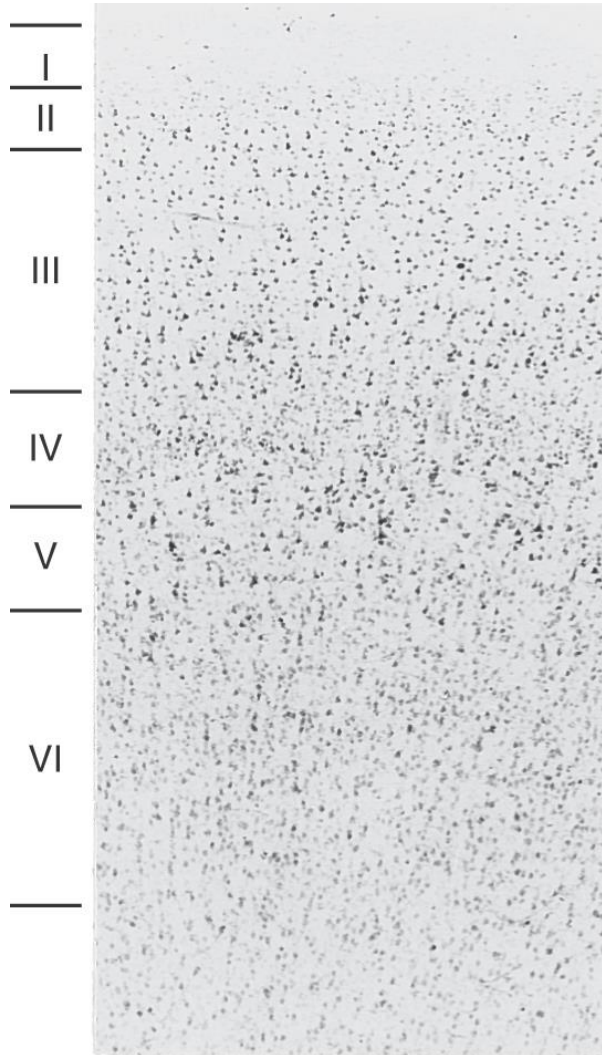


# Cytoarchitecture and Connections of the Neocortex

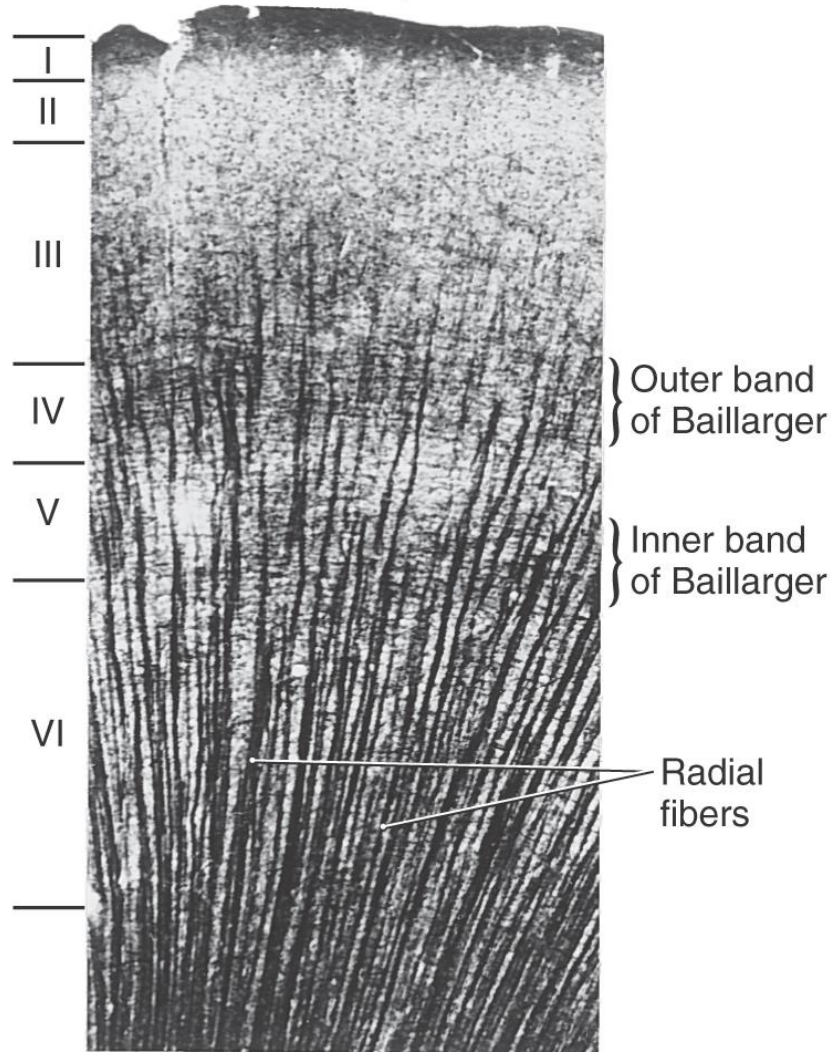




# Cytoarchitecture and Connections of the Neocortex



A

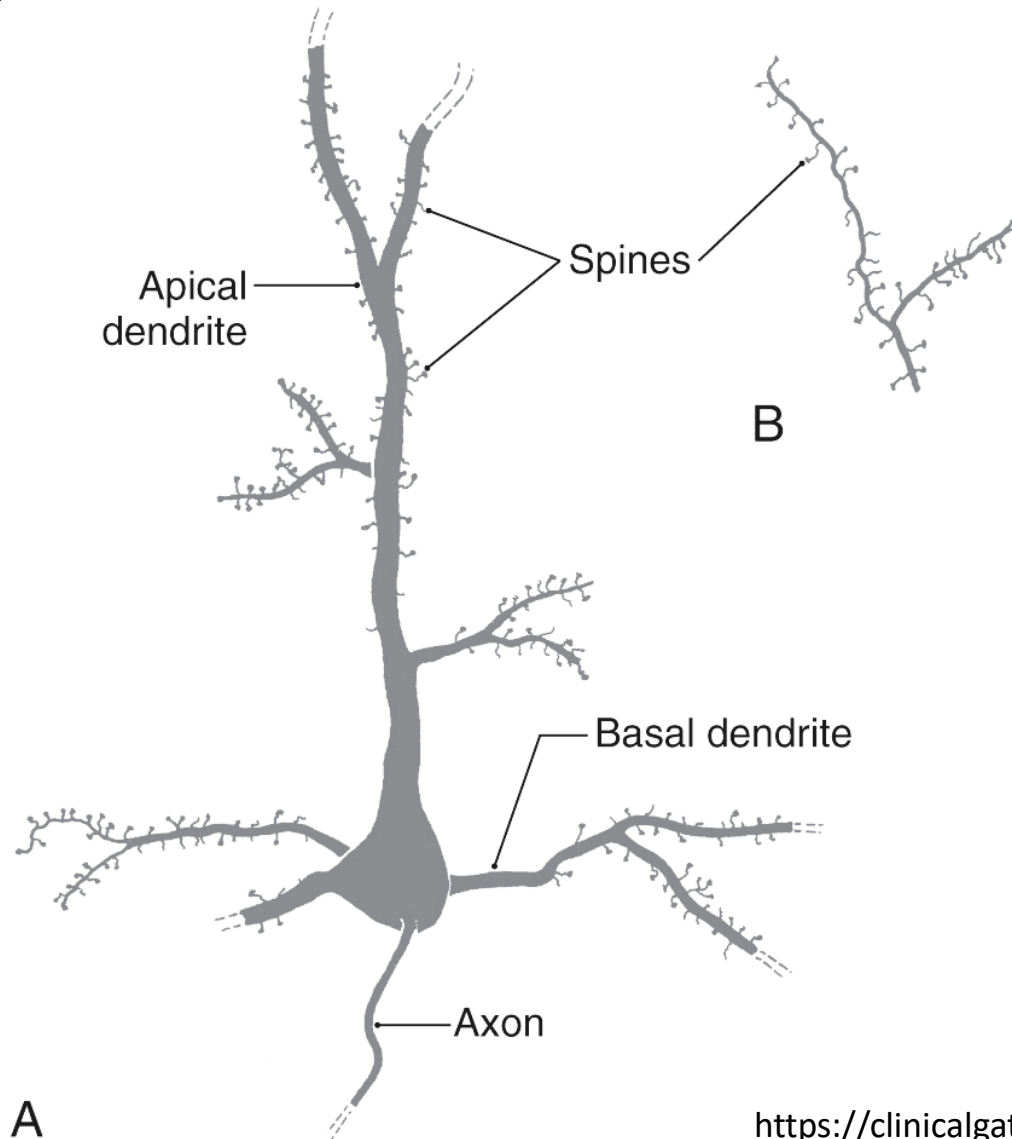


B <https://clinicalgate.com/the-cerebral-cortex-2/>



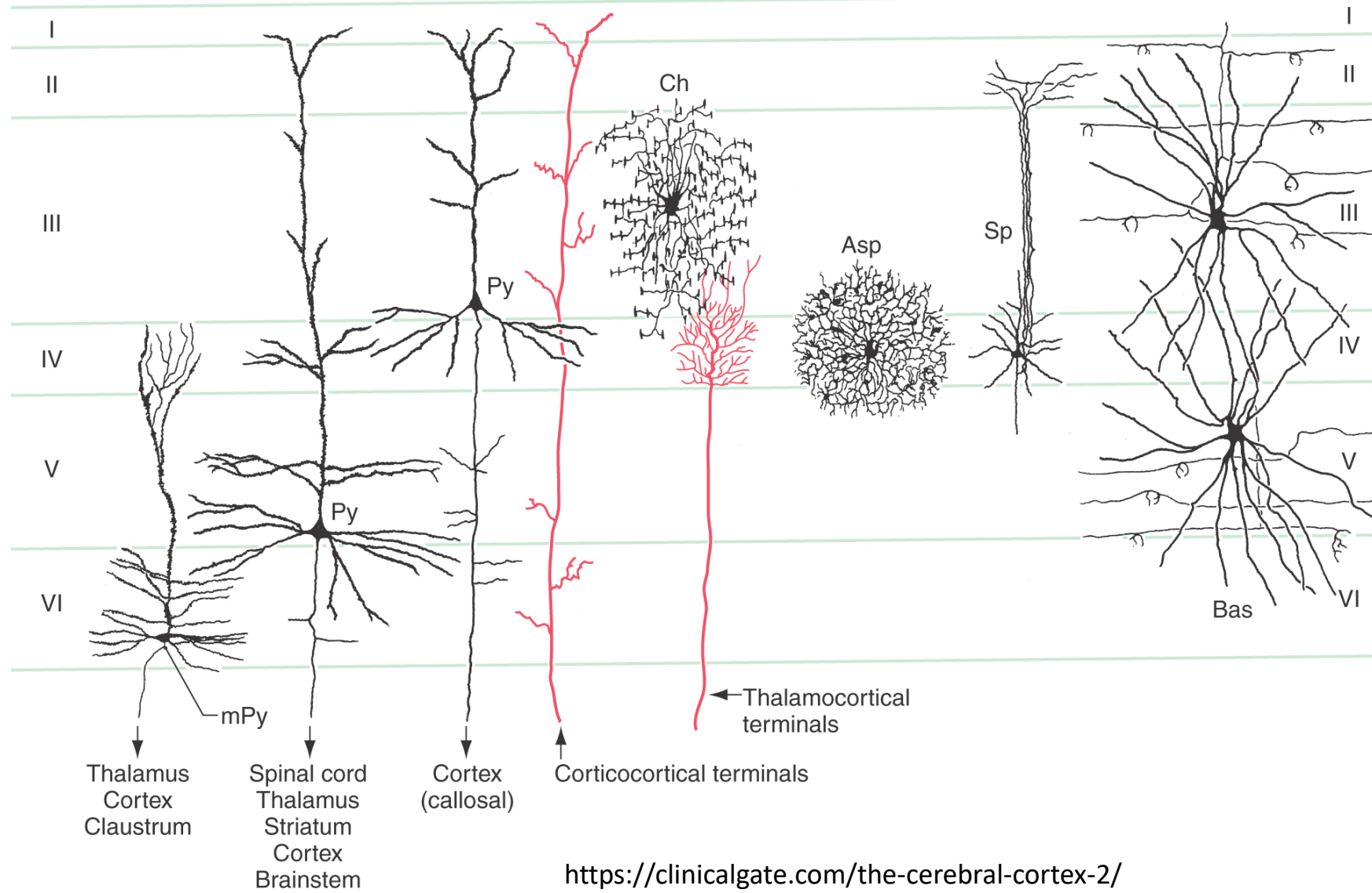
C

# Cytoarchitecture and Connections of the Neocortex

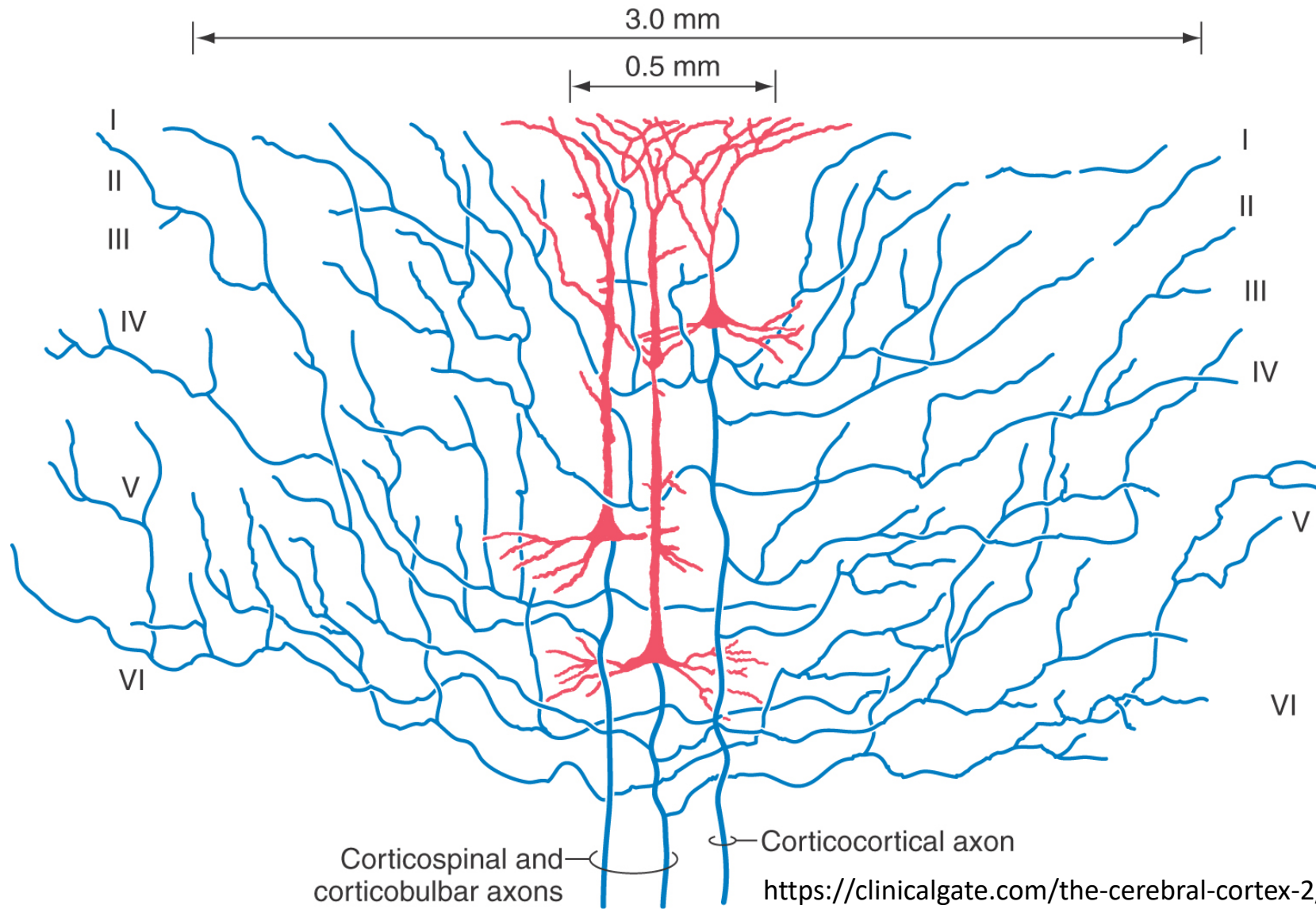




# Cytoarchitecture and Connections of the Neocortex

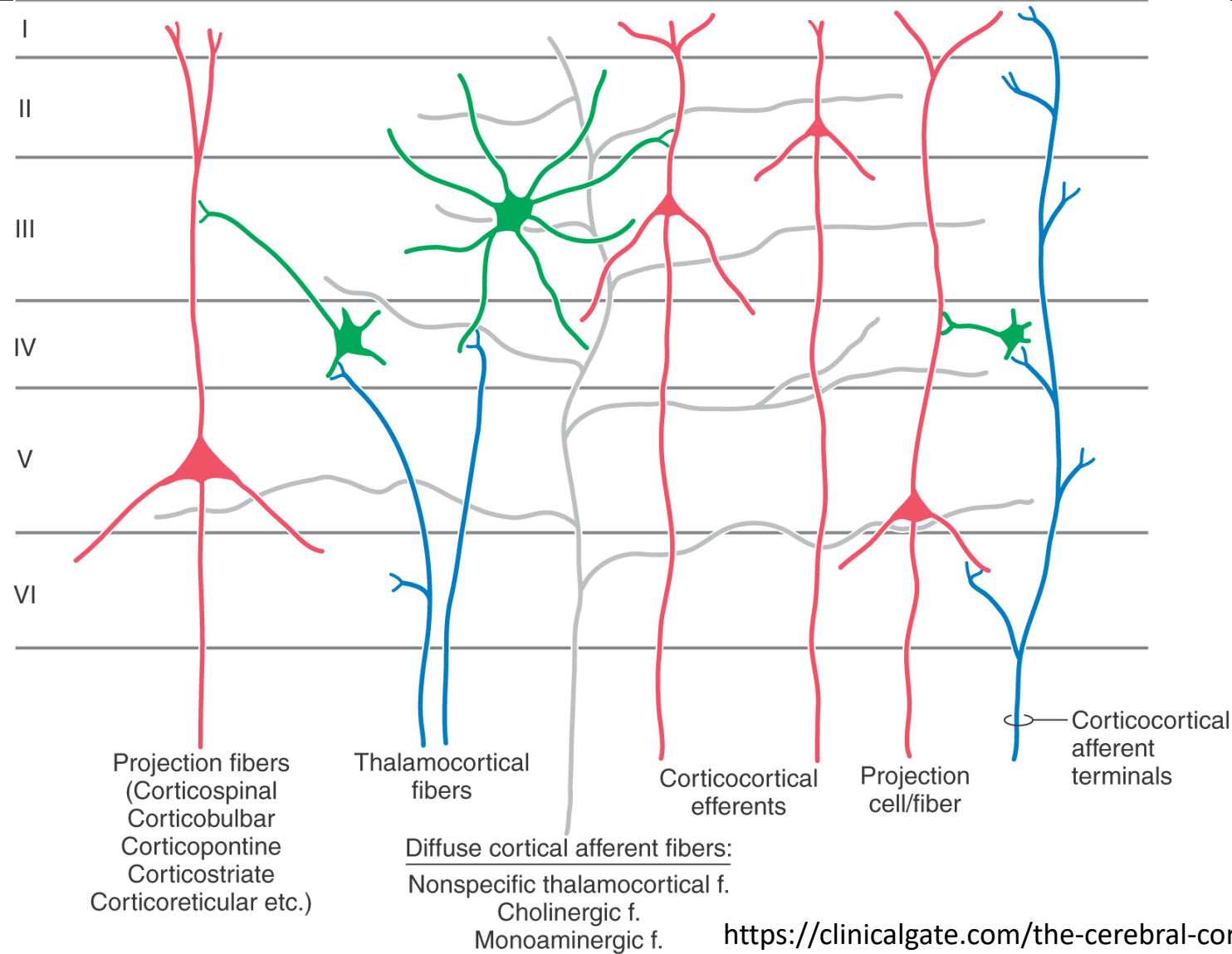


# Cytoarchitecture and Connections of the Neocortex

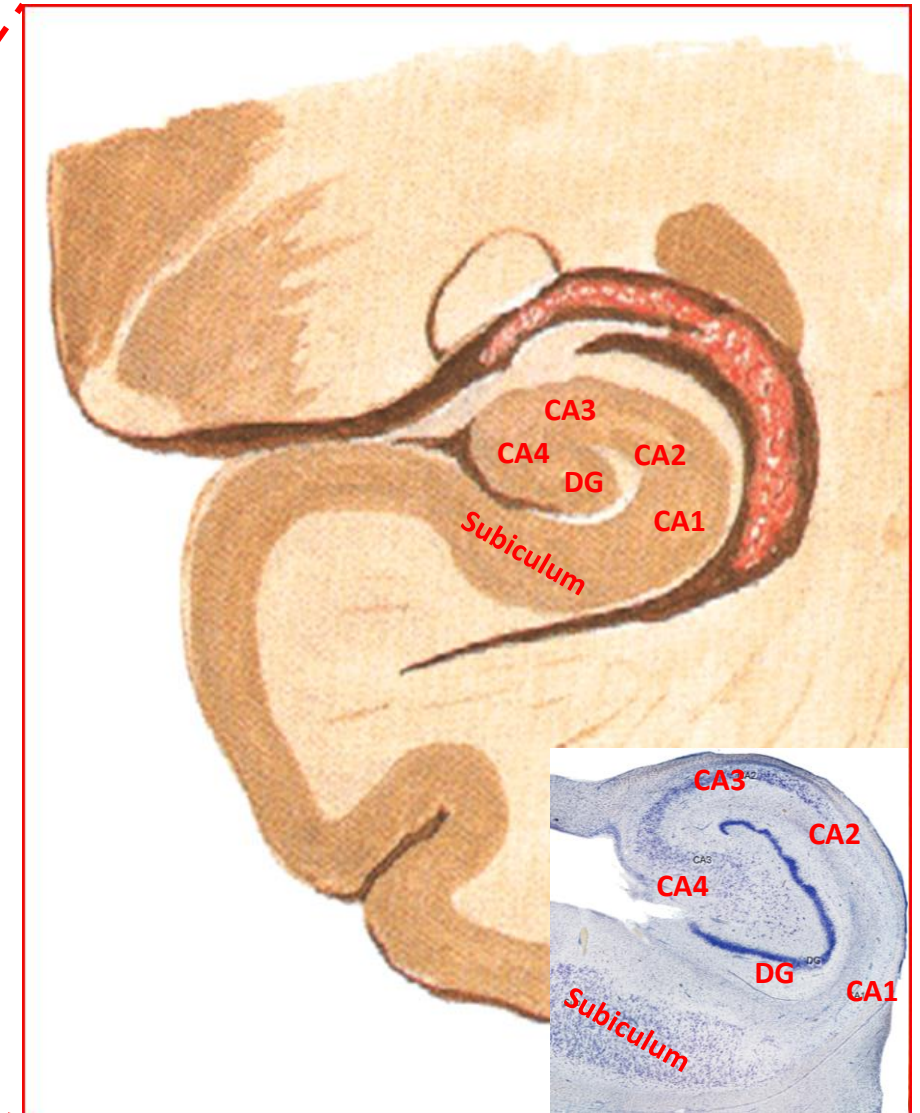
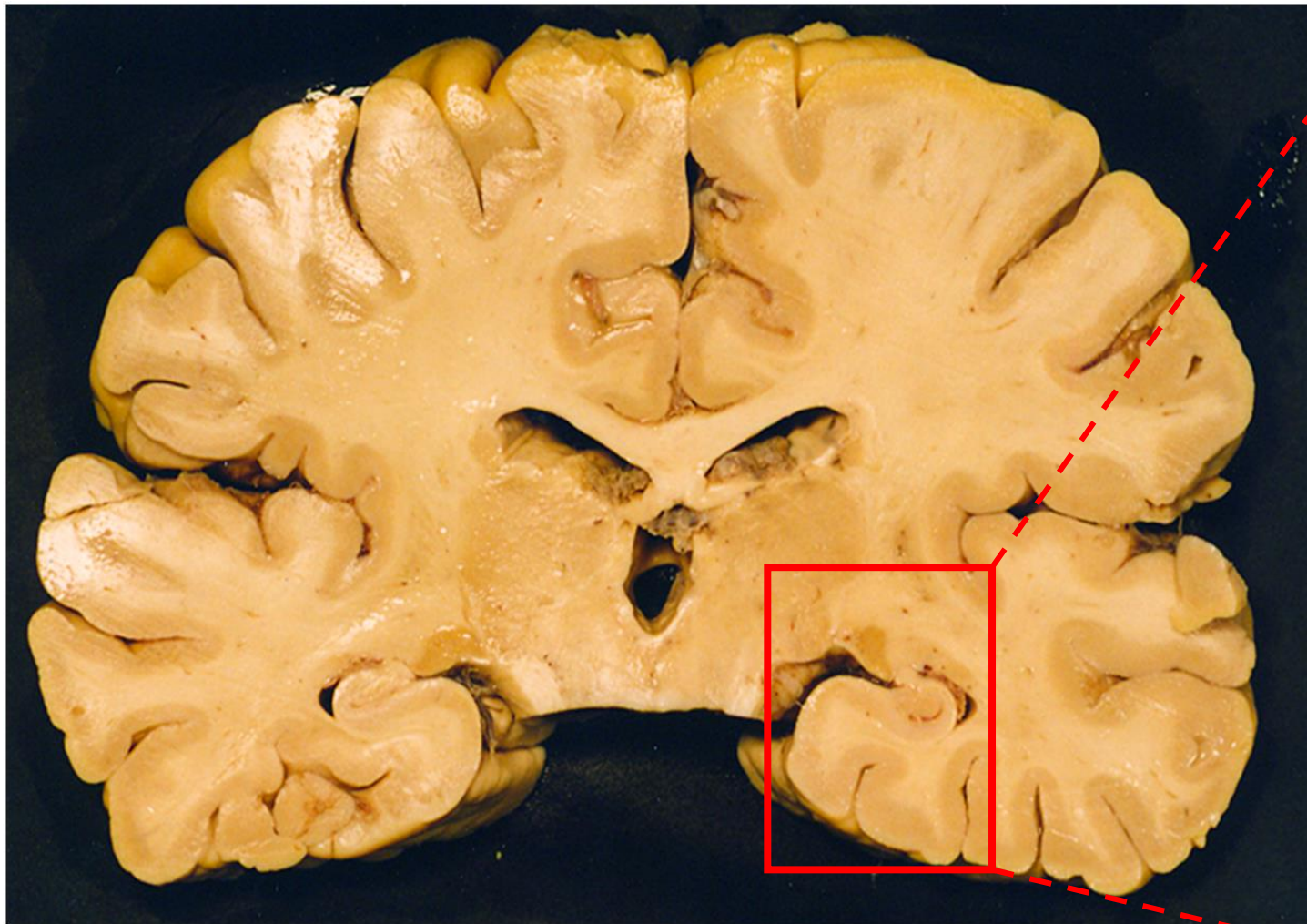




# Cytoarchitecture and Connections of the Neocortex

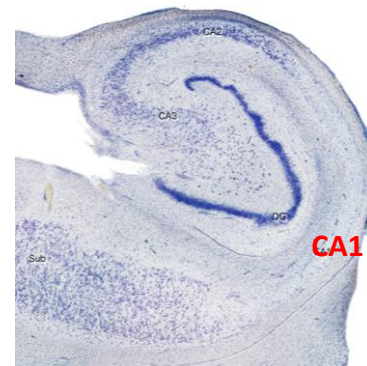
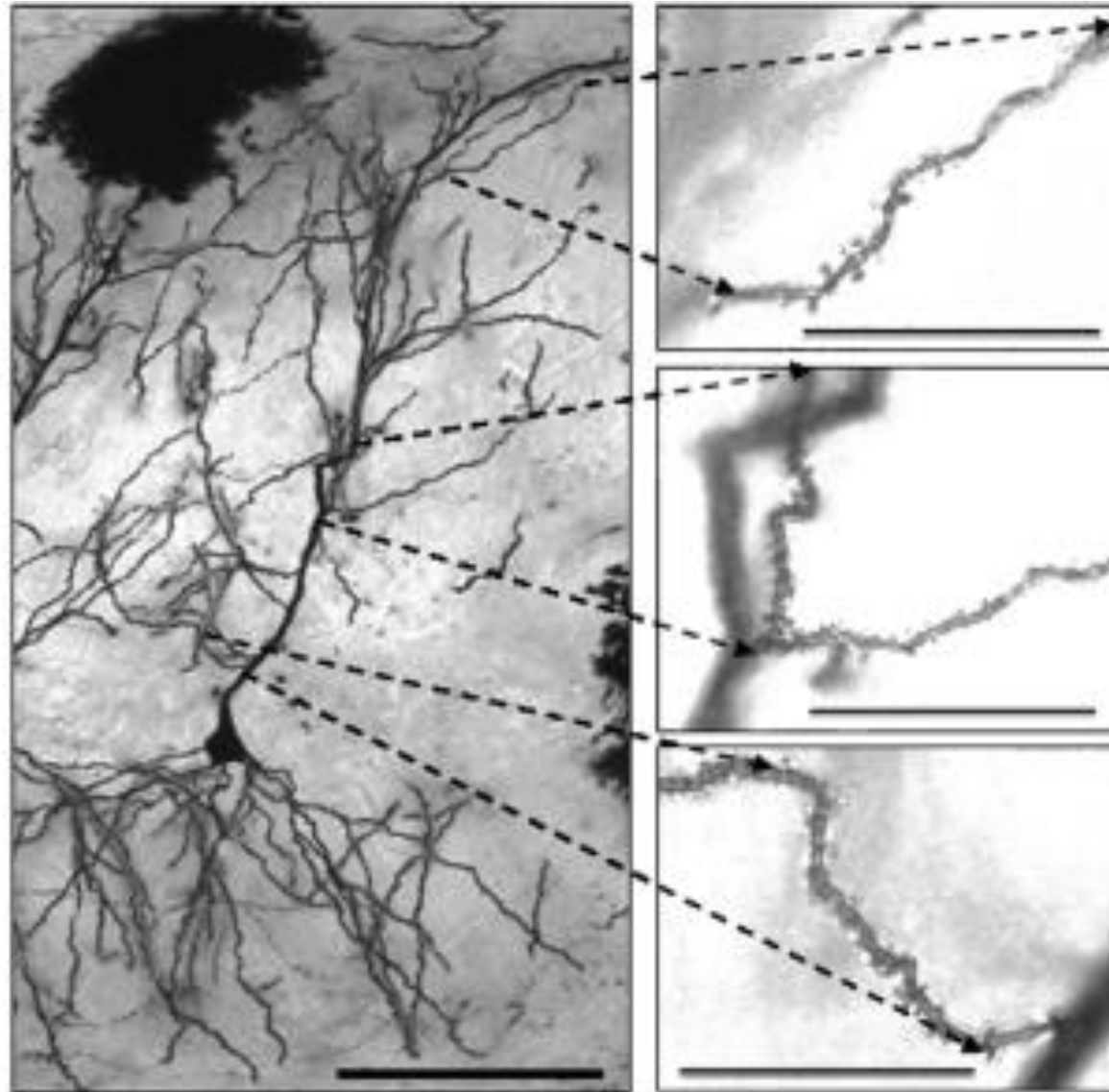
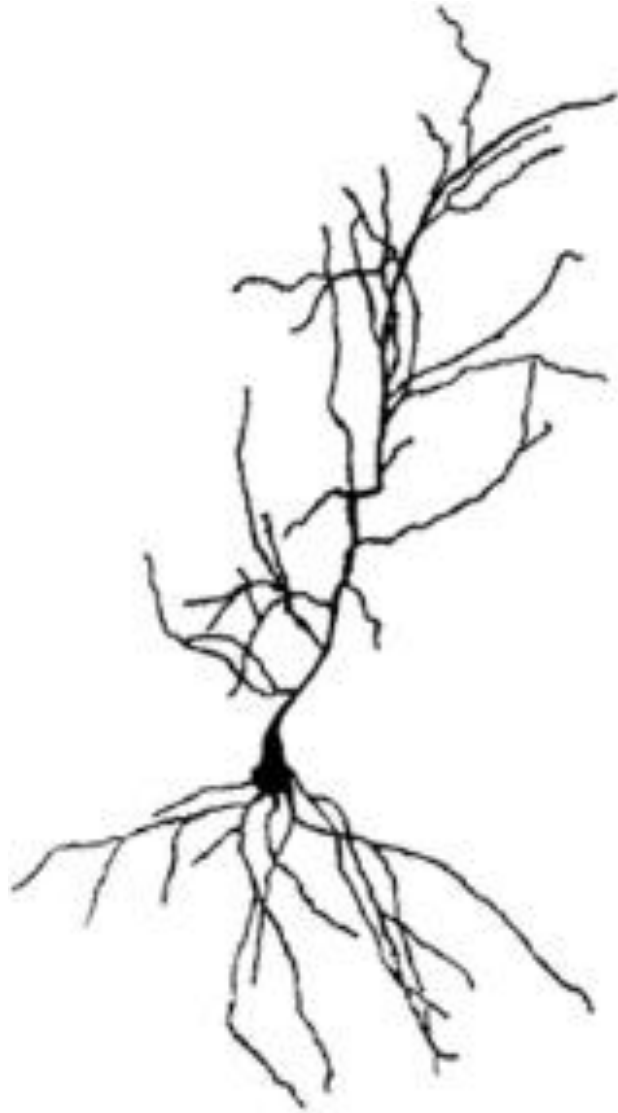


# Cytoarchitecture and Connections of the Hippocampus

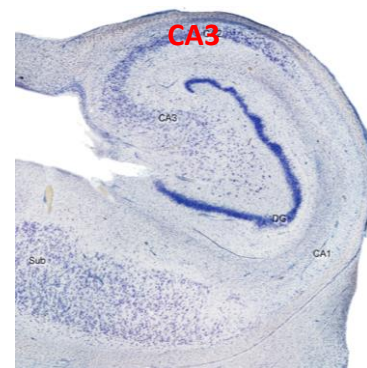
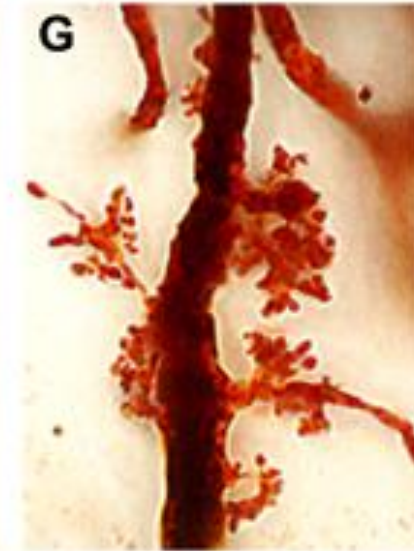
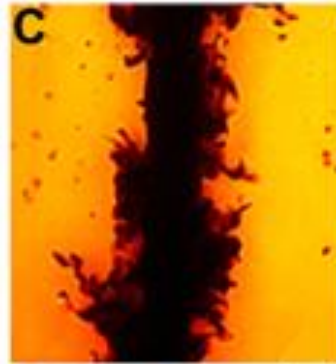




# Cytoarchitecture and Connections of the Hippocampus

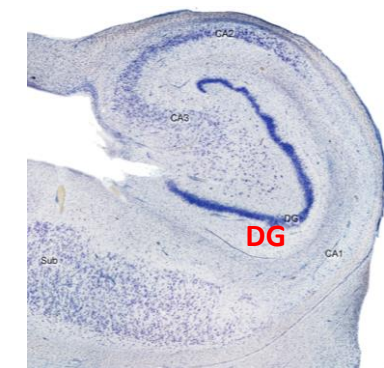
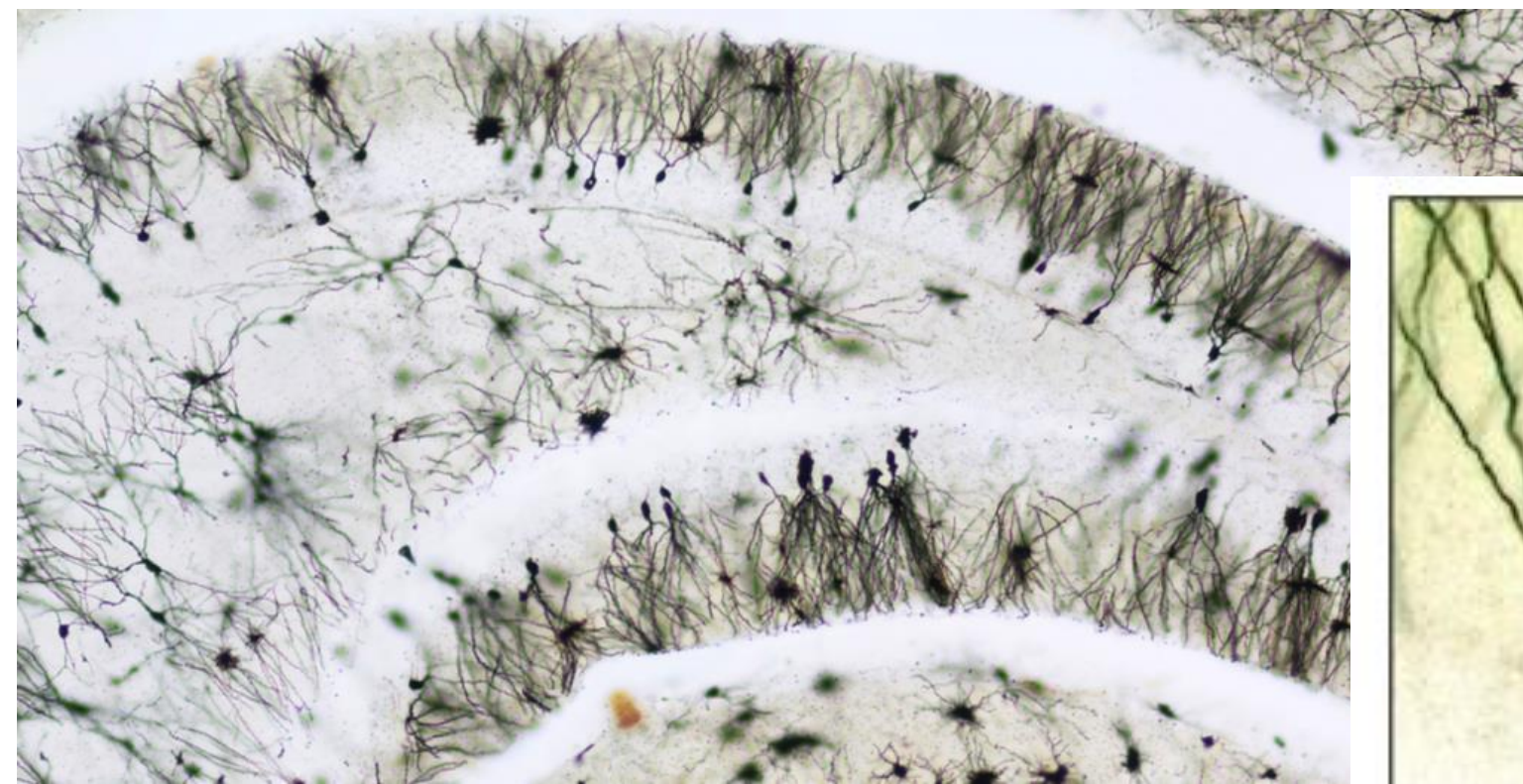


# Cytoarchitecture and Connections of the Hippocampus

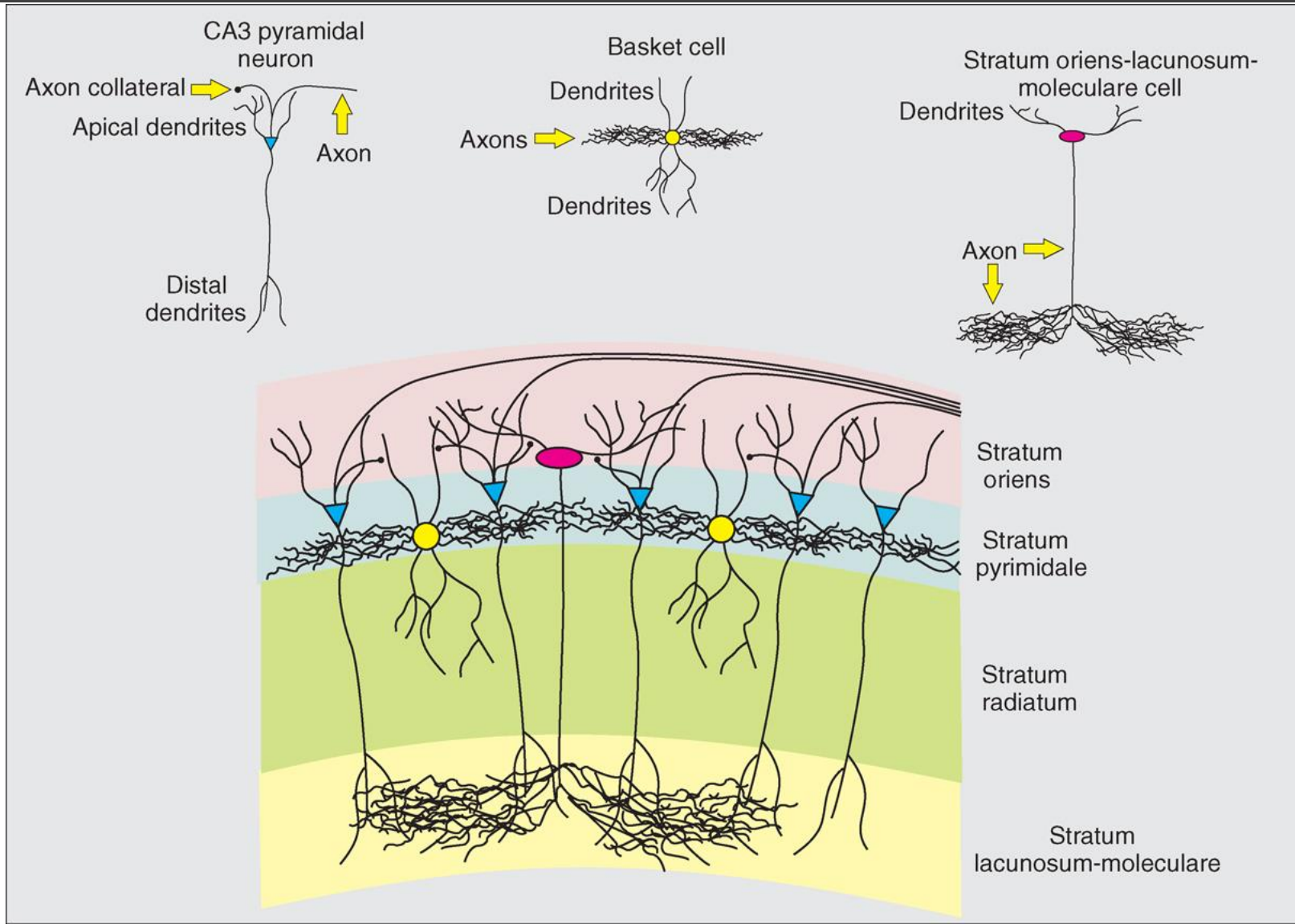




# Cytoarchitecture and Connections of the Hippocampus

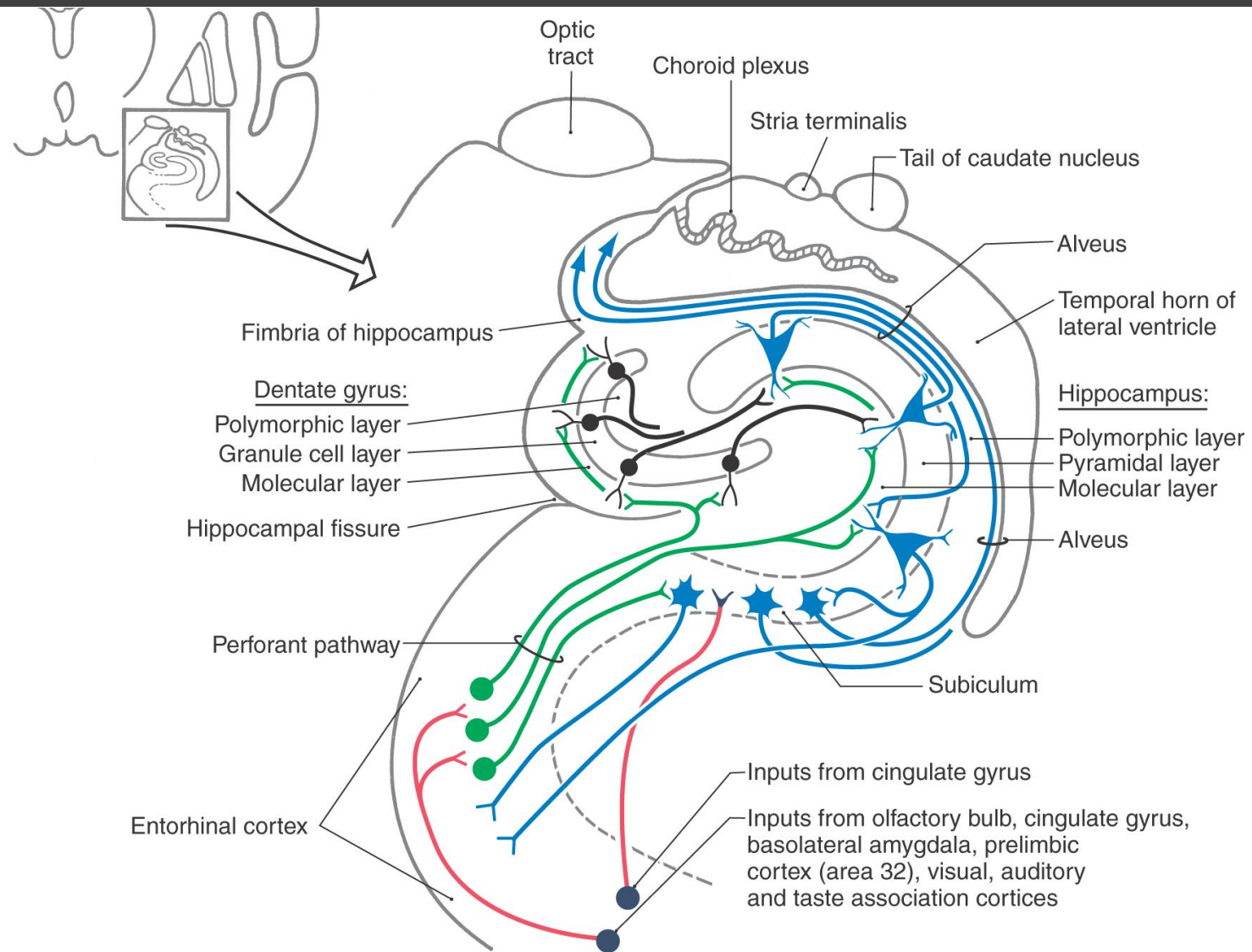


# Cytoarchitecture and Connections of the Hippocampus

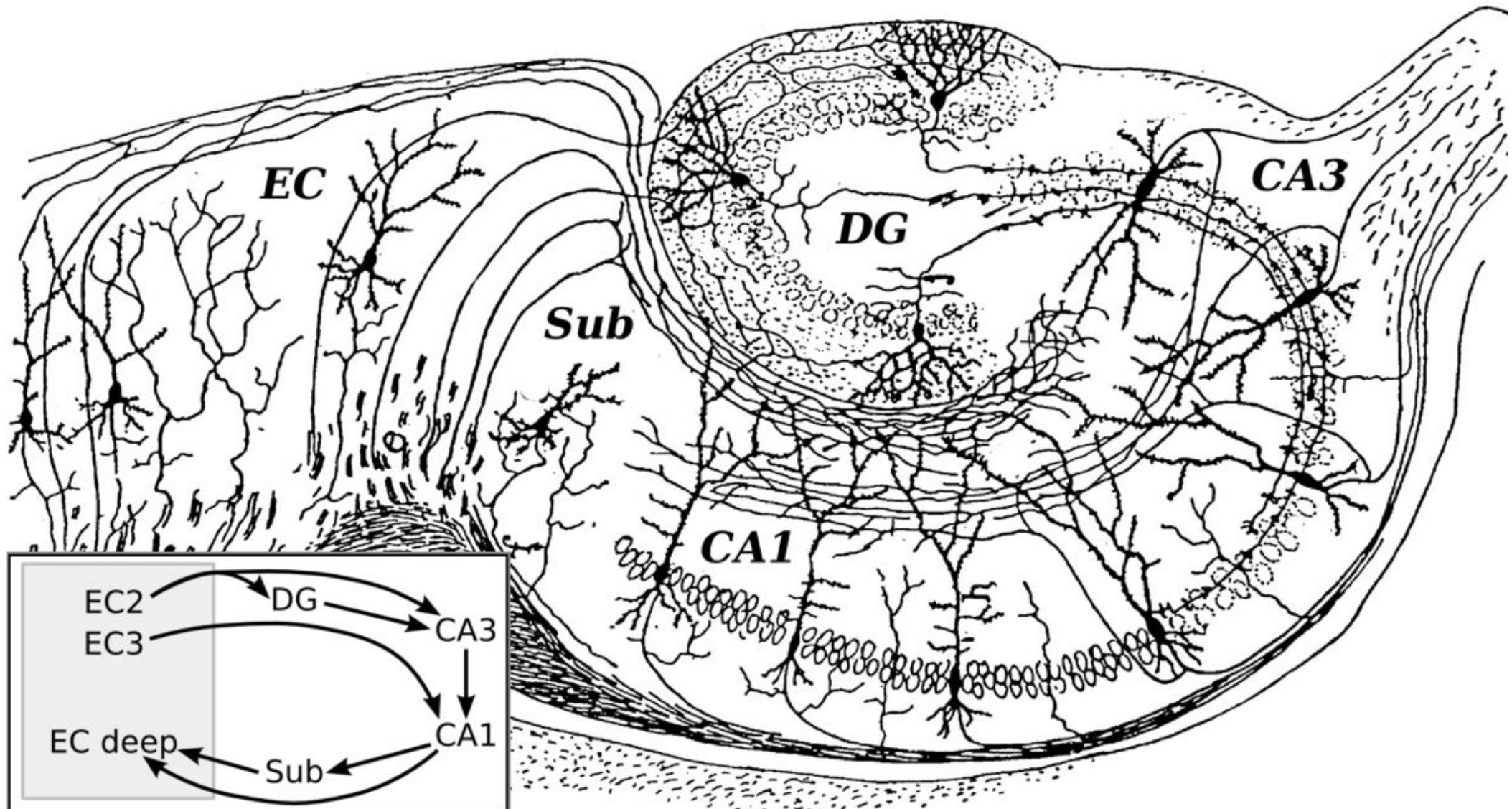




# Cytoarchitecture and Connections of the Hippocampus

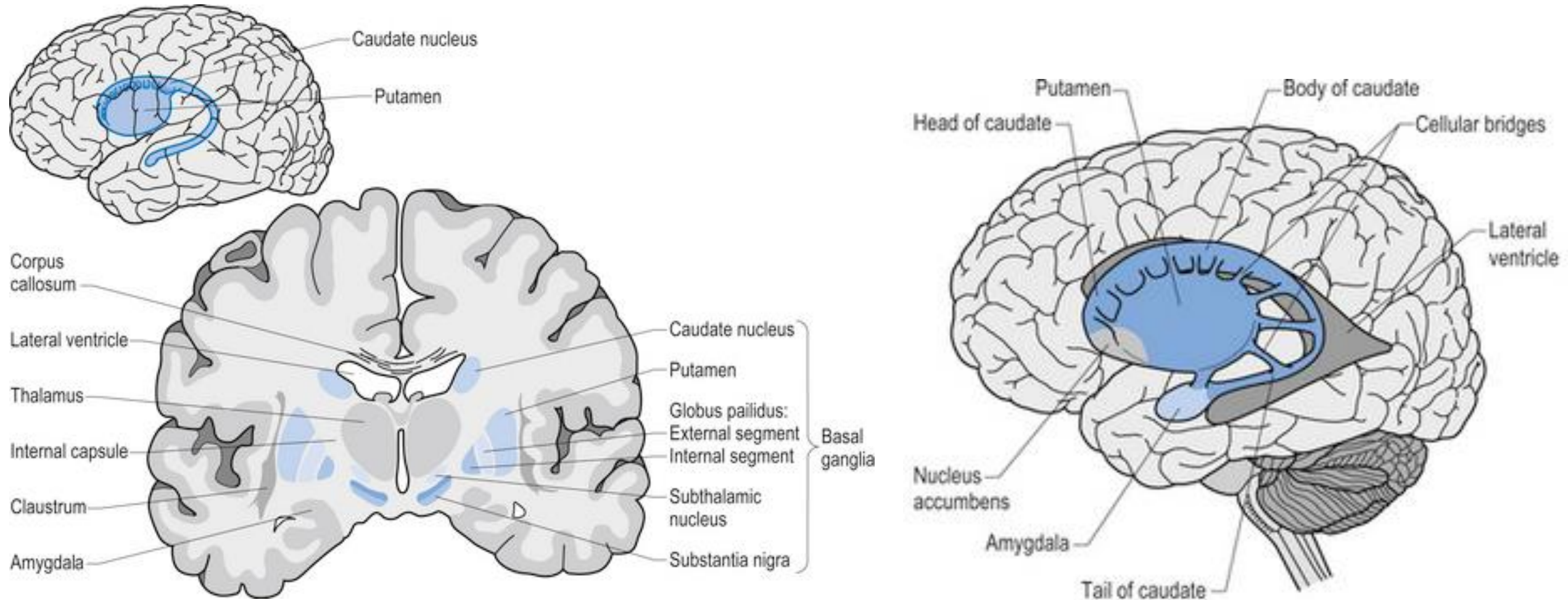


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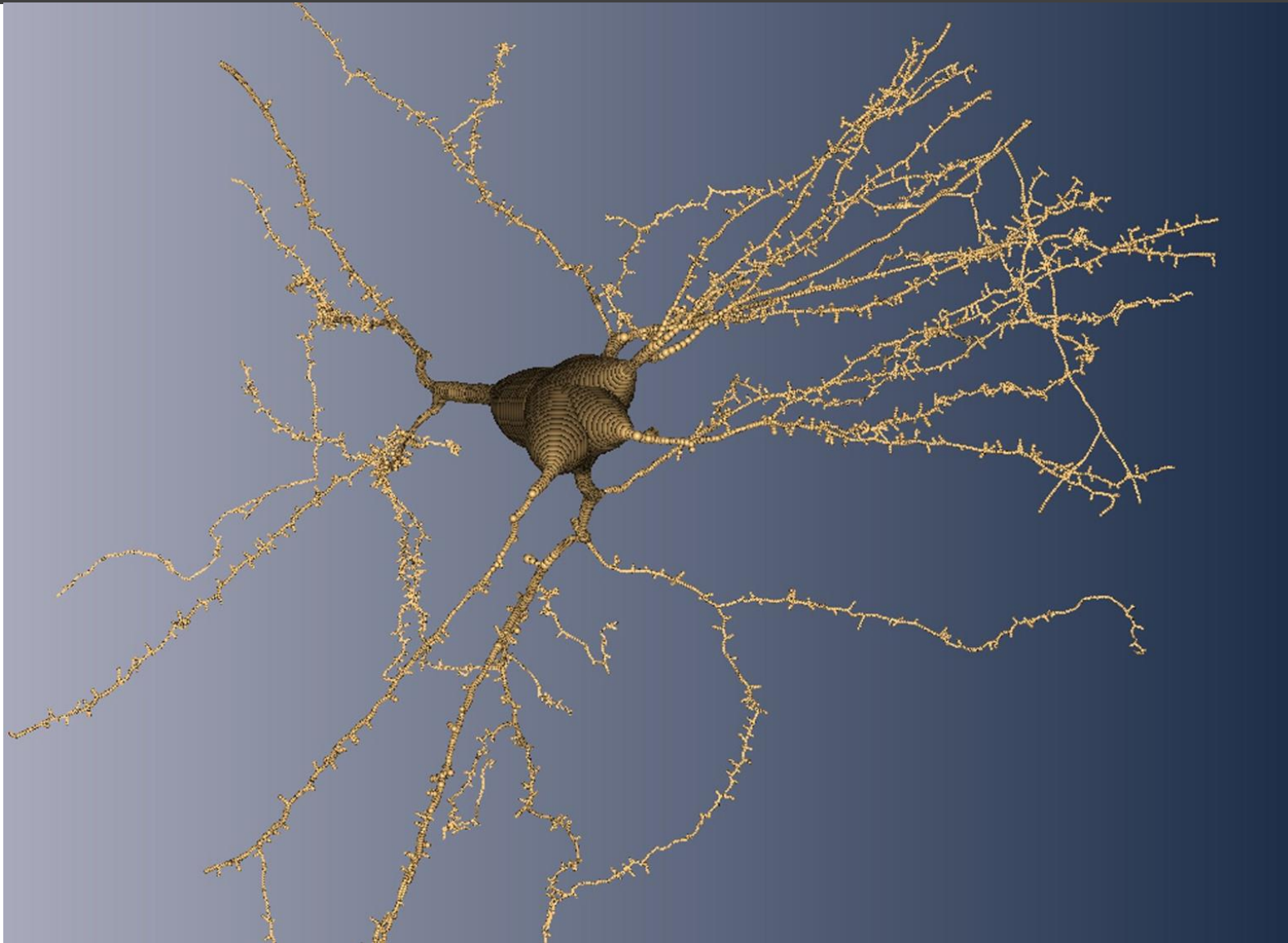




# Cytoarchitecture and Connections of the Neostriatum

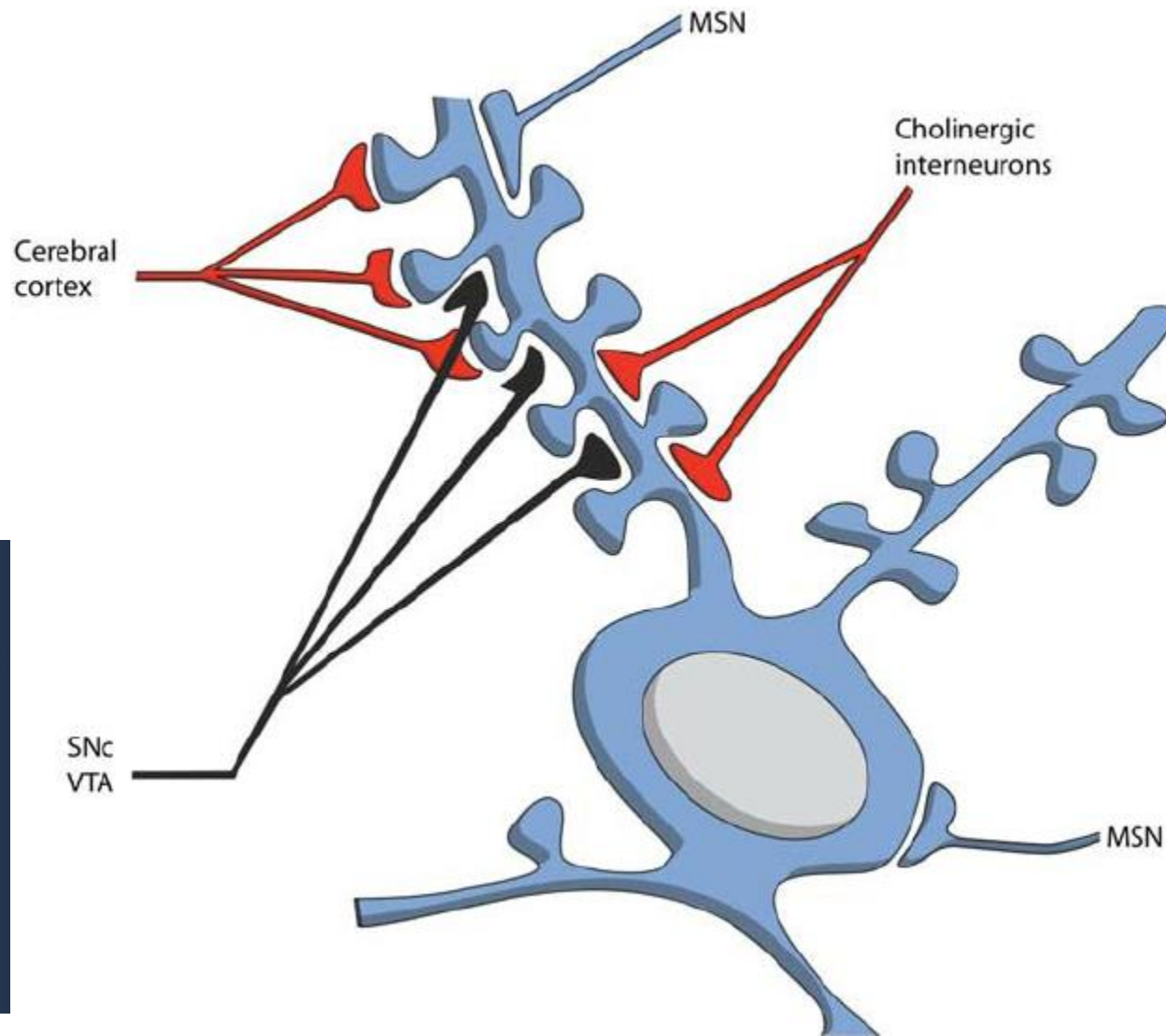


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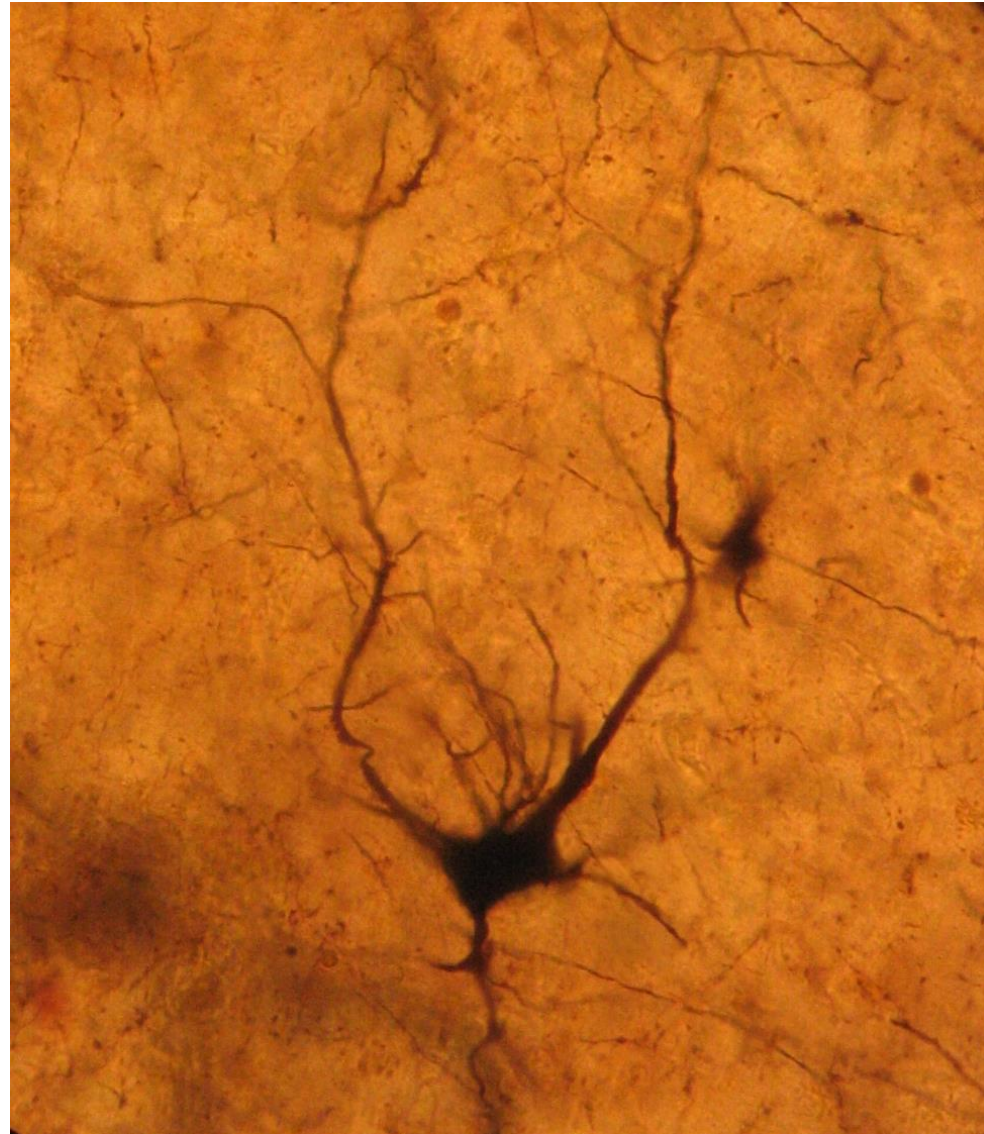
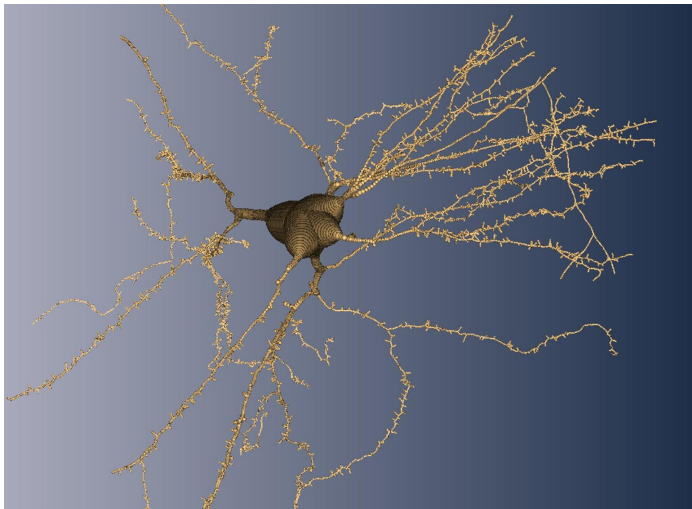
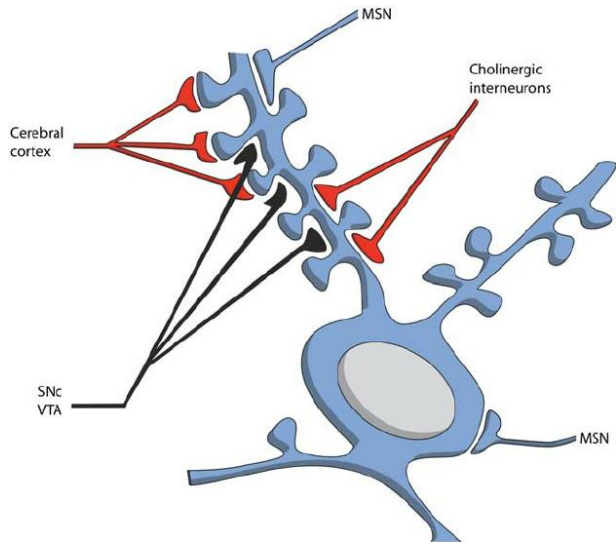




# Cytoarchitecture and Connections of the Neostriatum

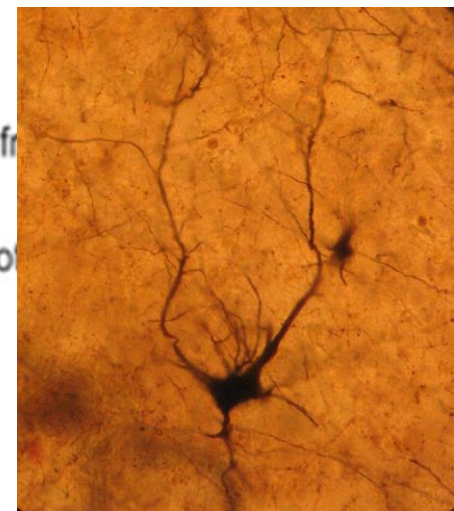
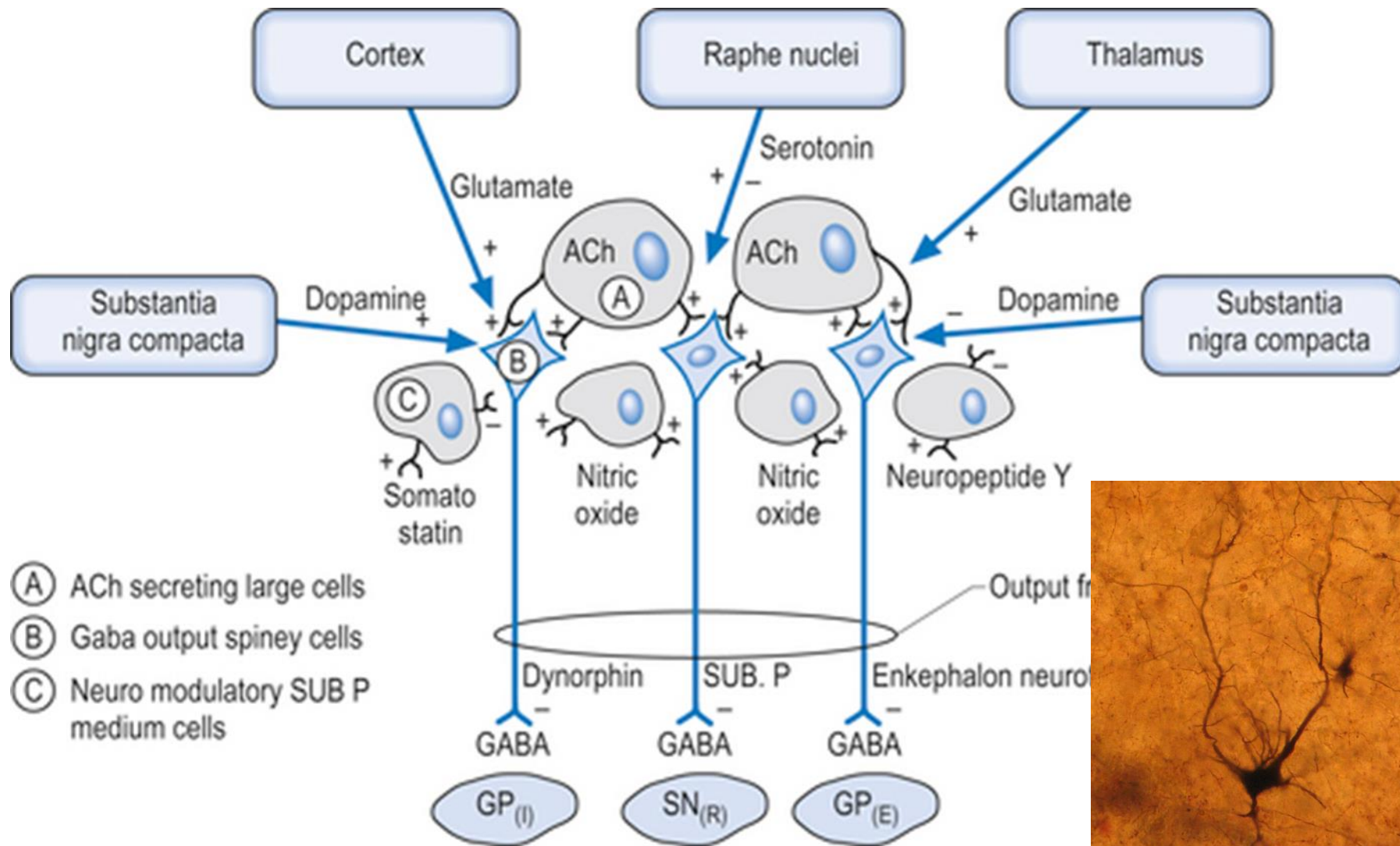
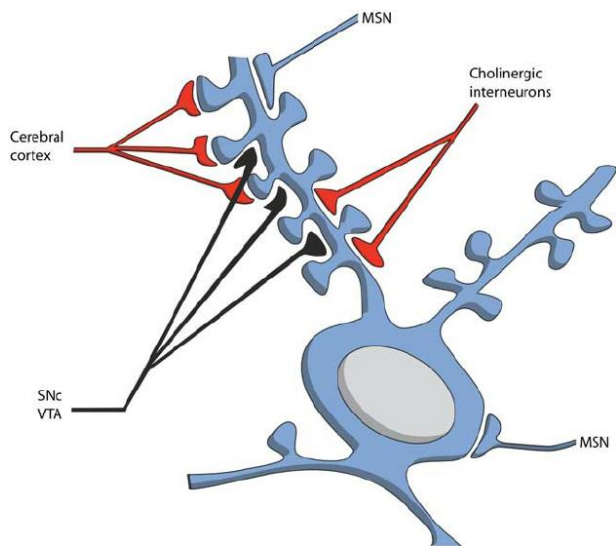


# Cytoarchitecture and Connections of the Neostriatum

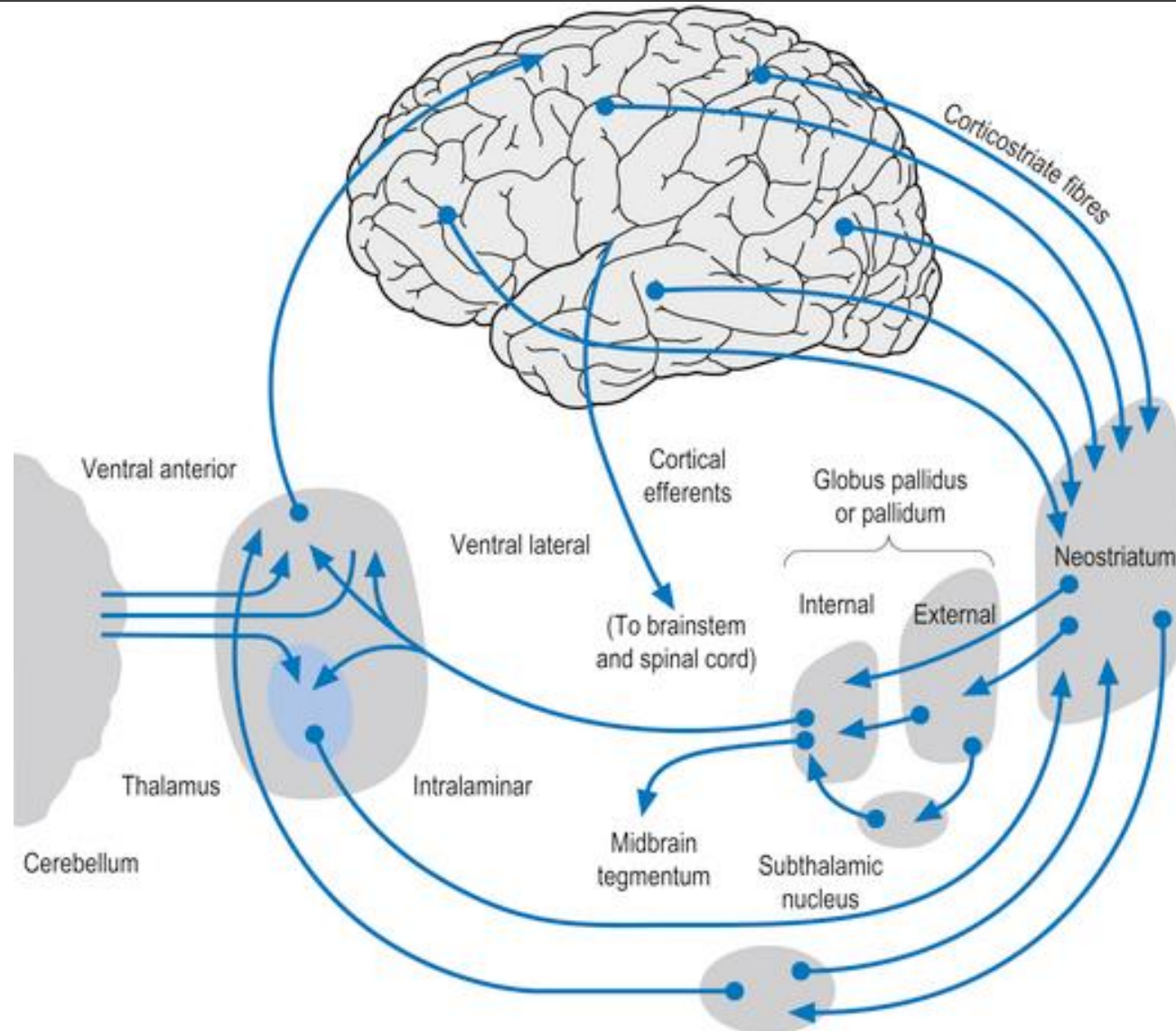




# Cytoarchitecture and Connections of the Neostriatum

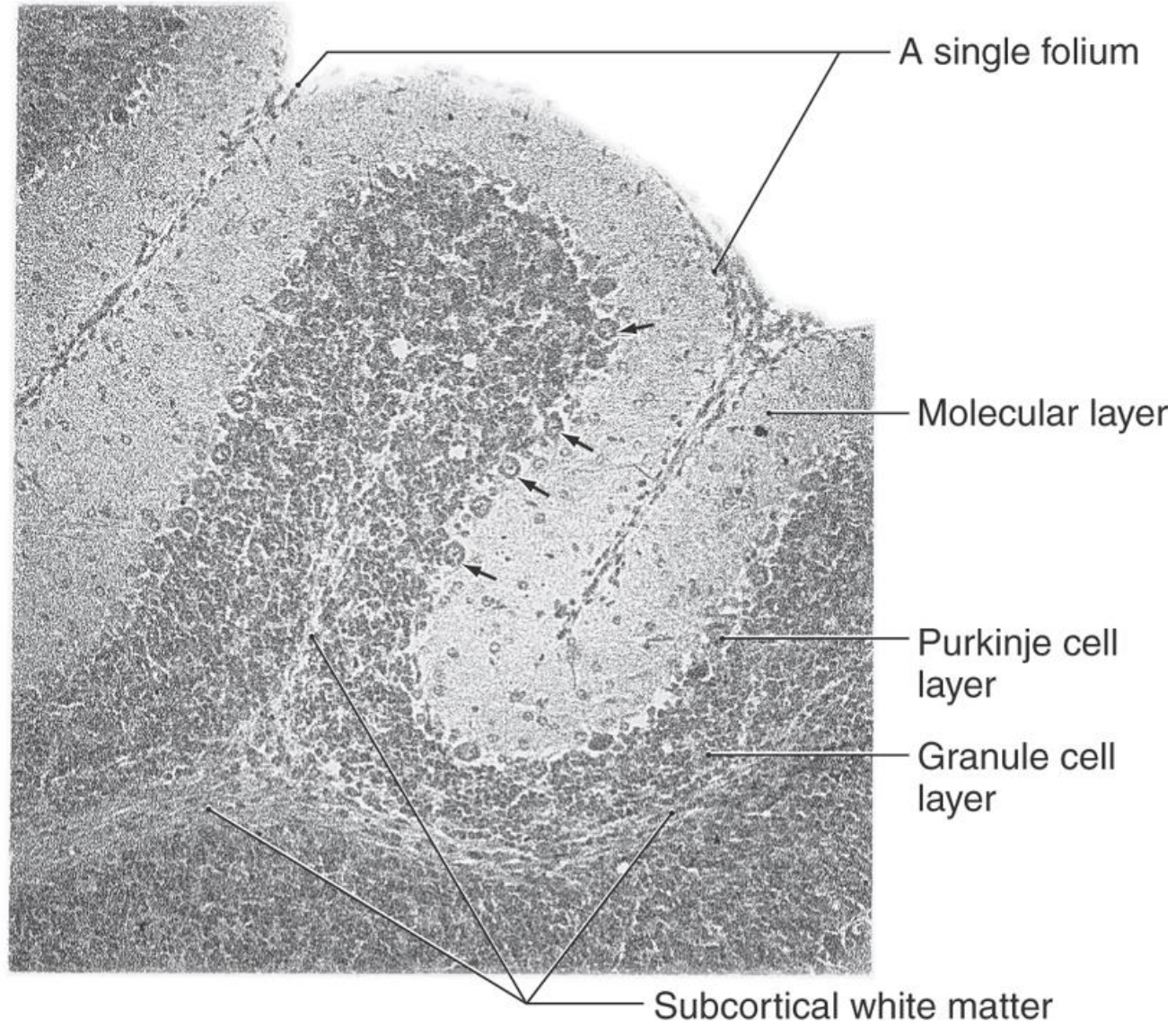


# Cytoarchitecture and Connections of the Neostriatum

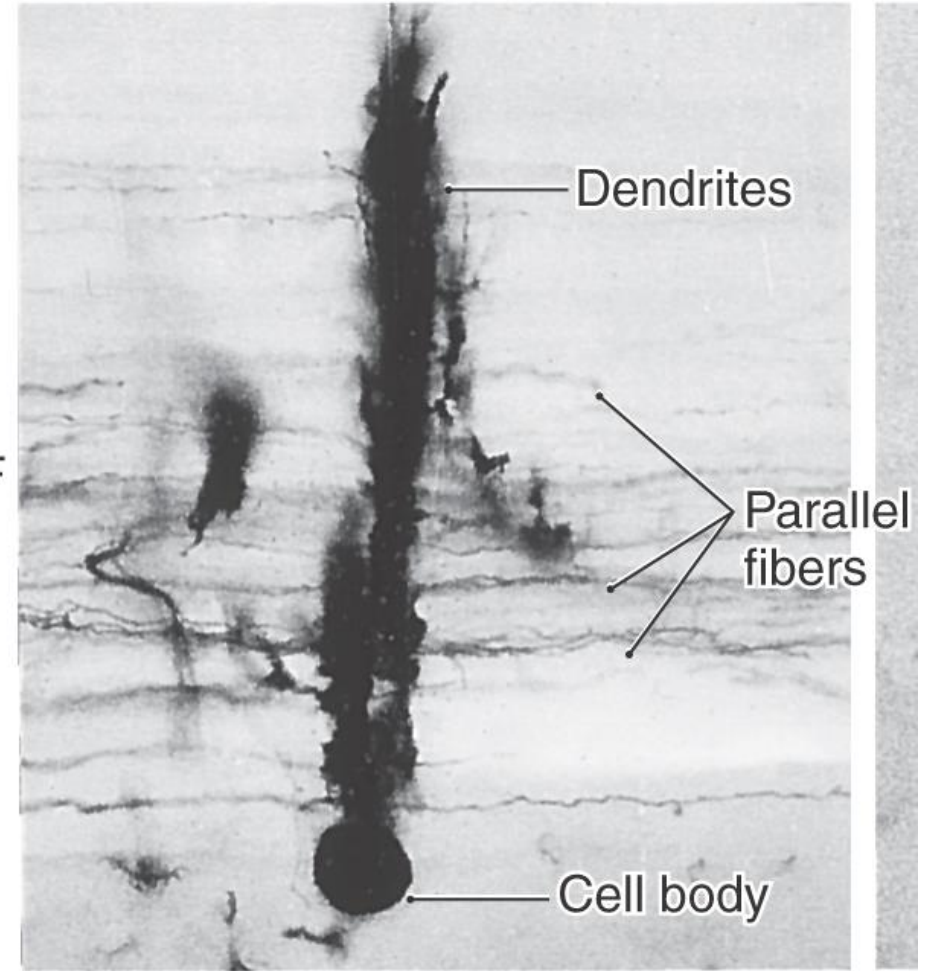
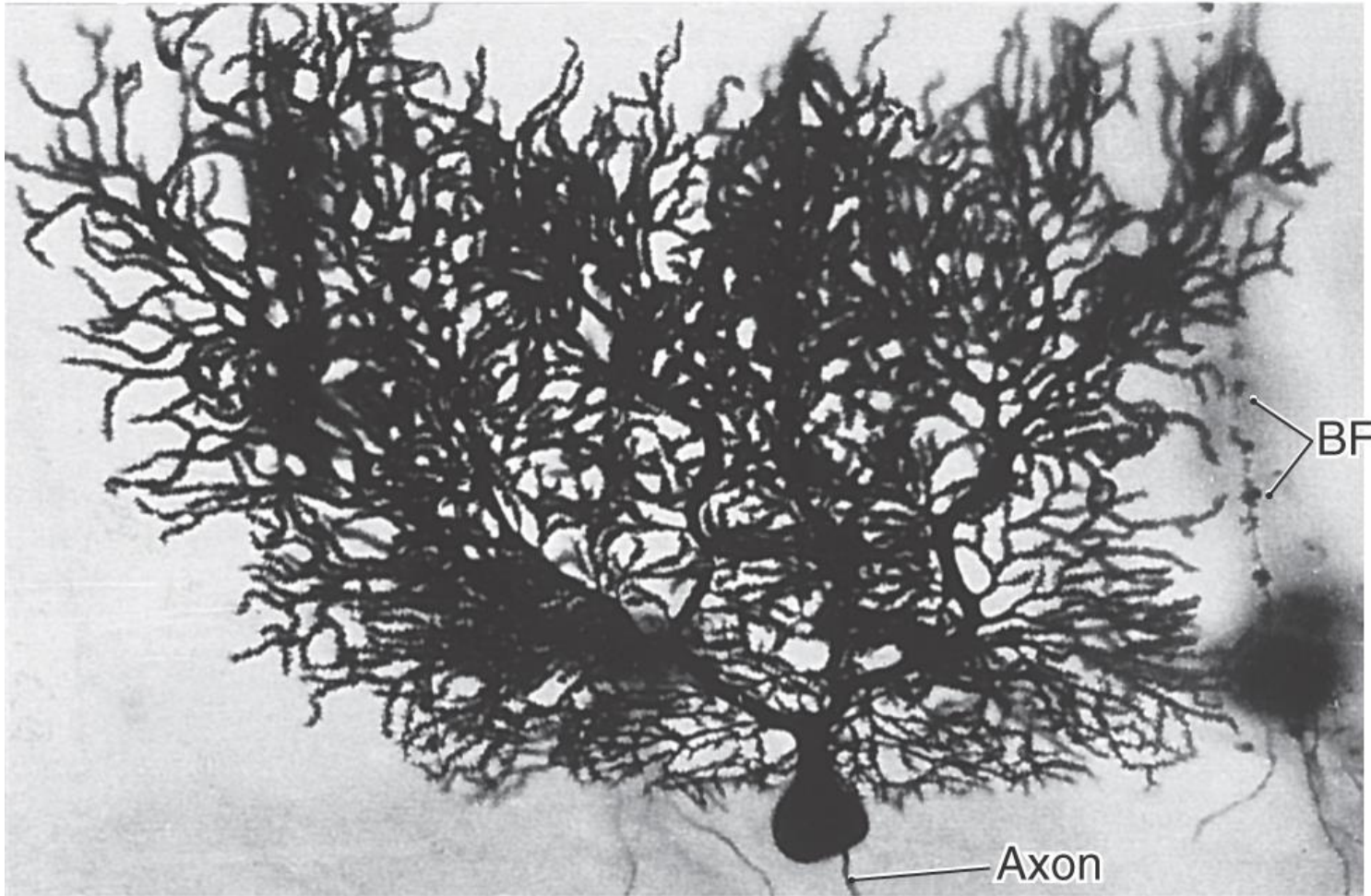




# Cytoarchitecture and Connections of the Cerebellum

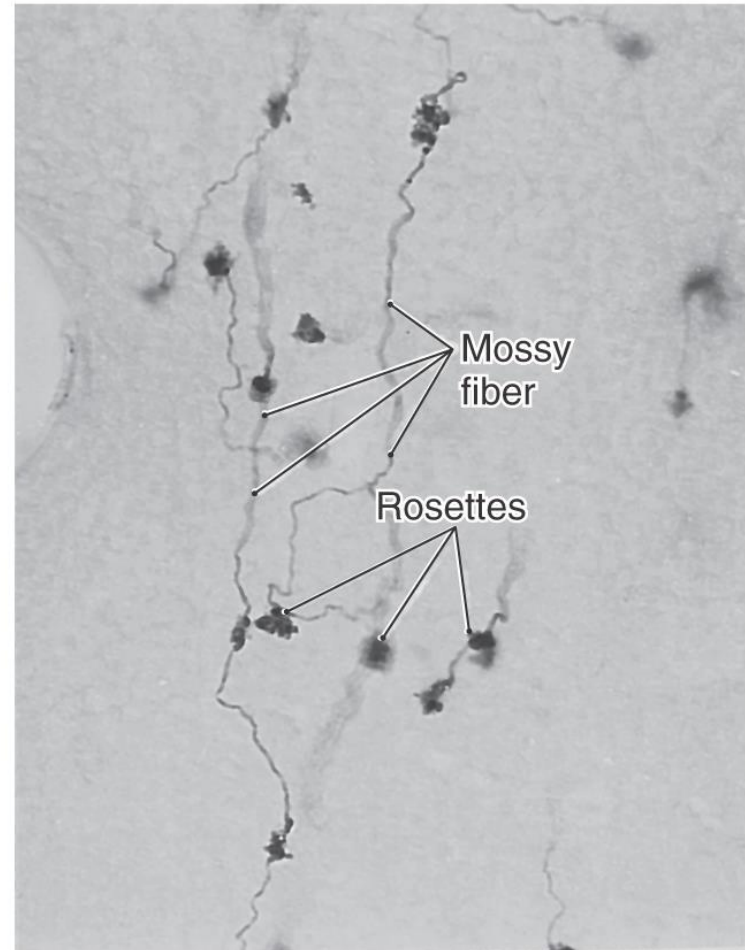
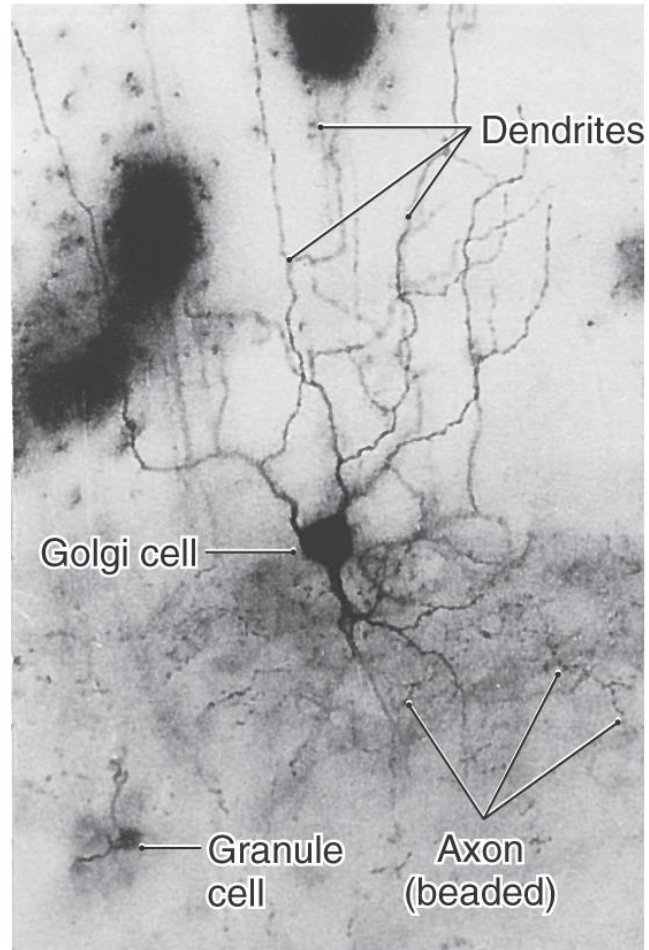
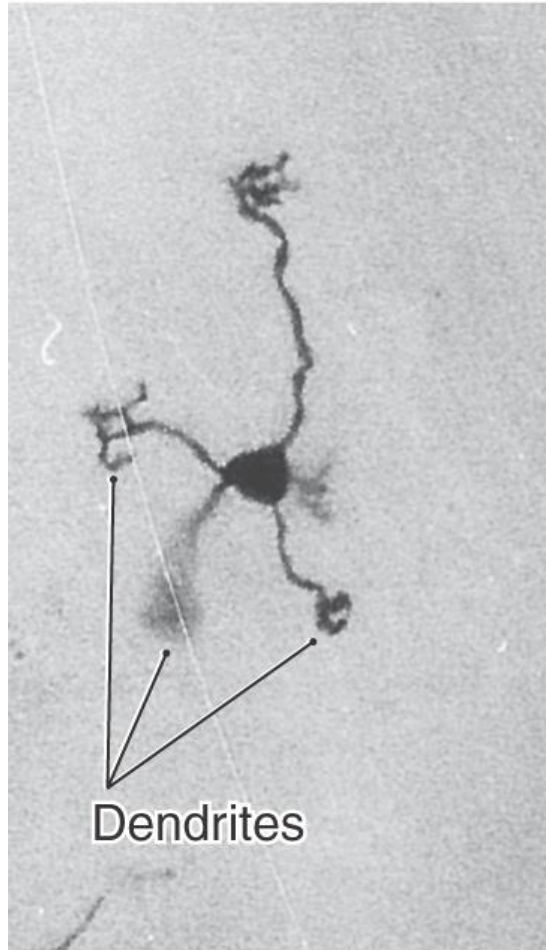


# Cytoarchitecture and Connections of the Cerebellum

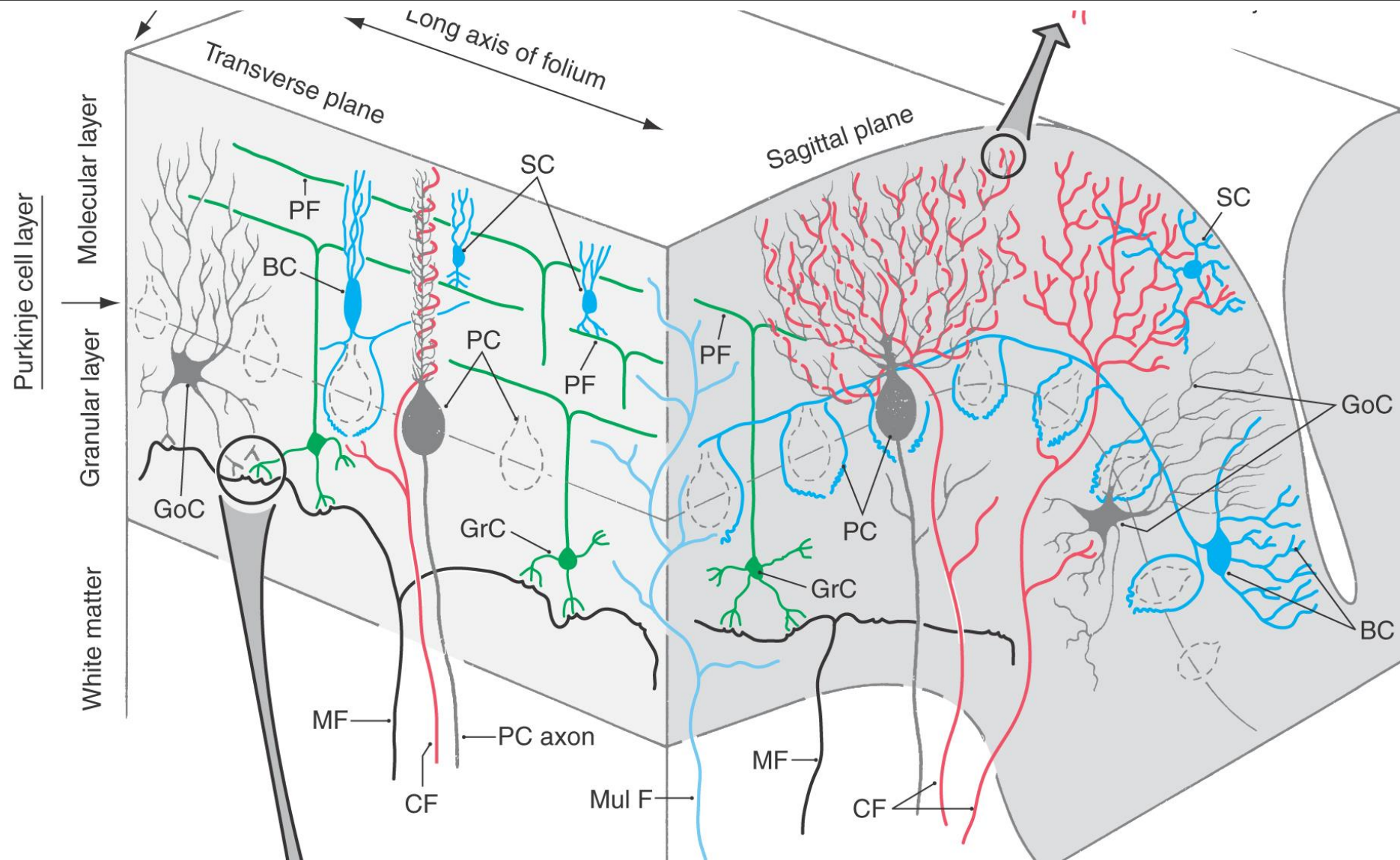




# Cytoarchitecture and Connections of the Cerebellum

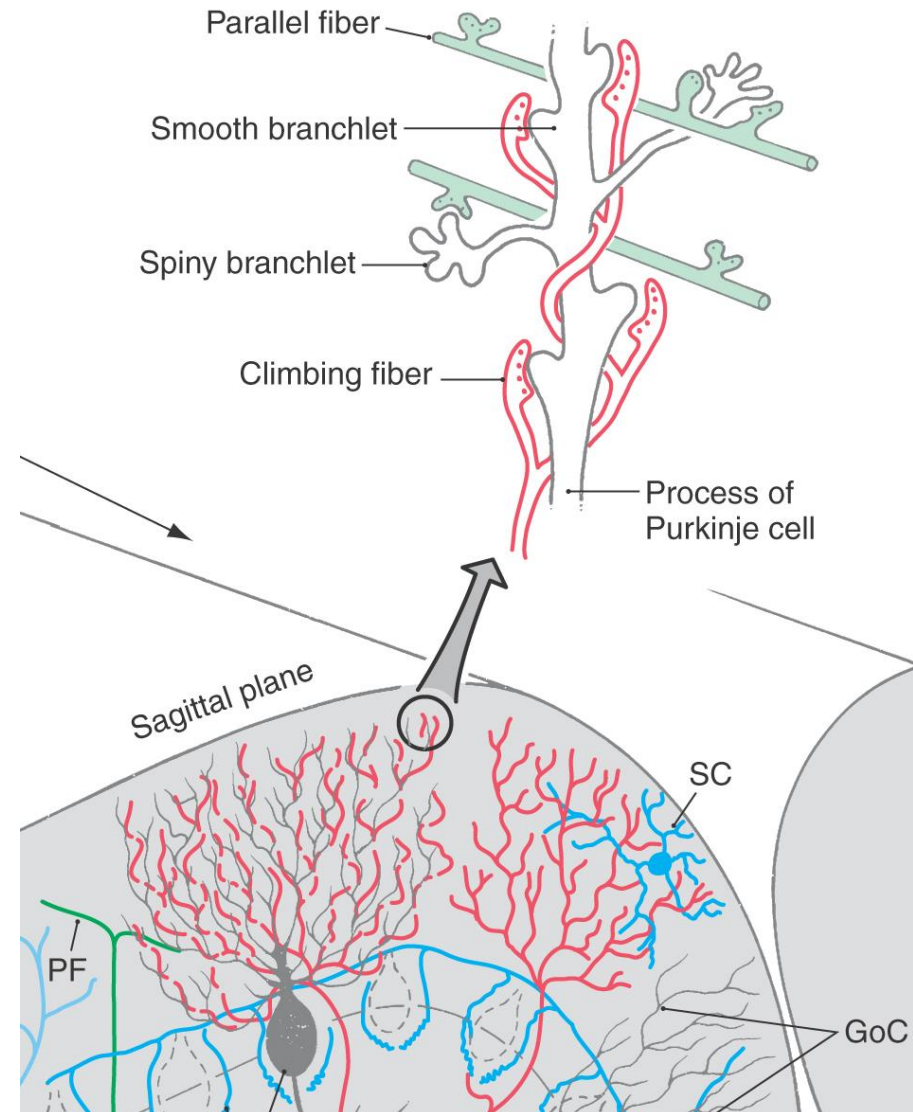


# Cytoarchitecture and Connections of the Cerebellum

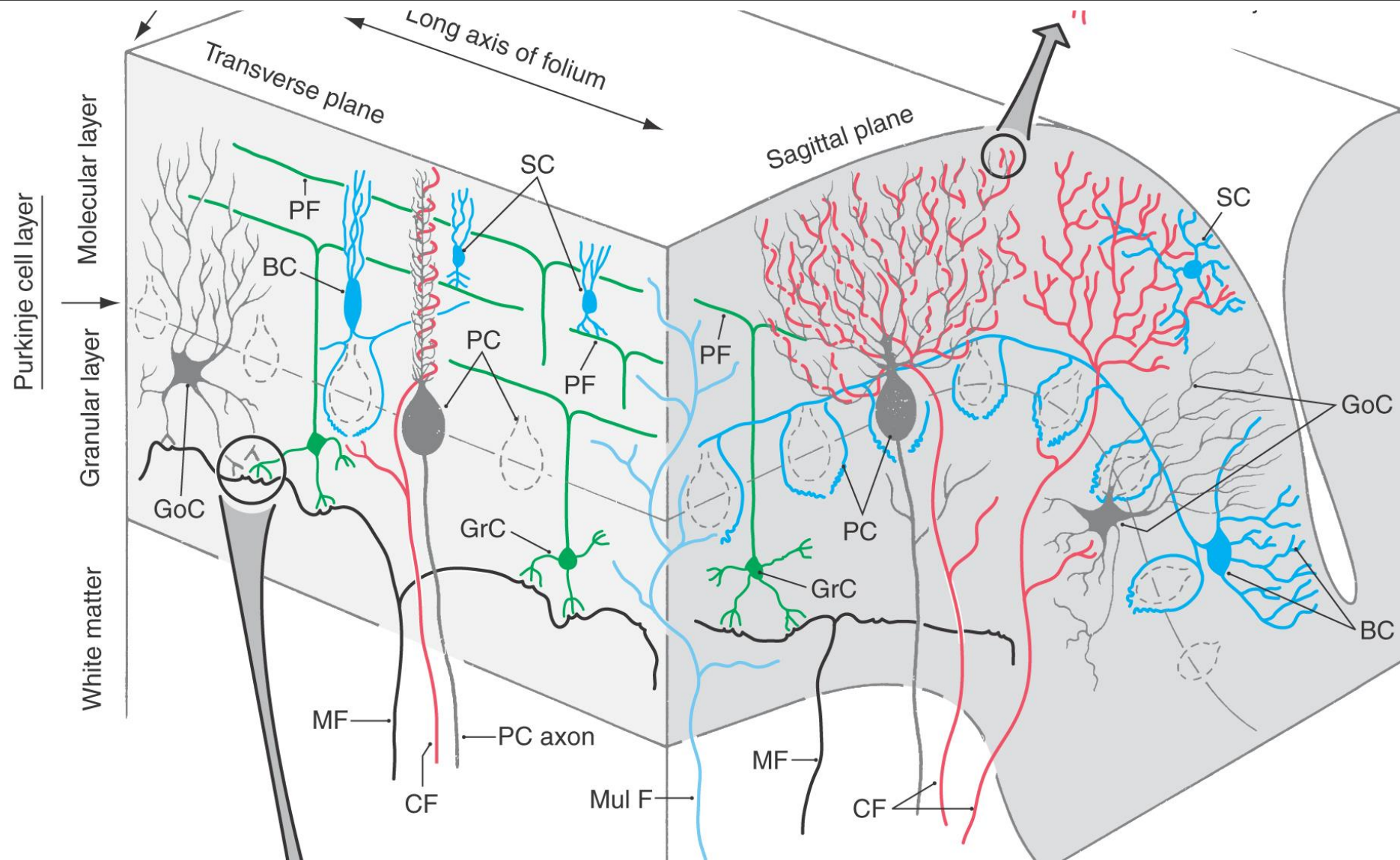




# Cytoarchitecture and Connections of the Cerebellum

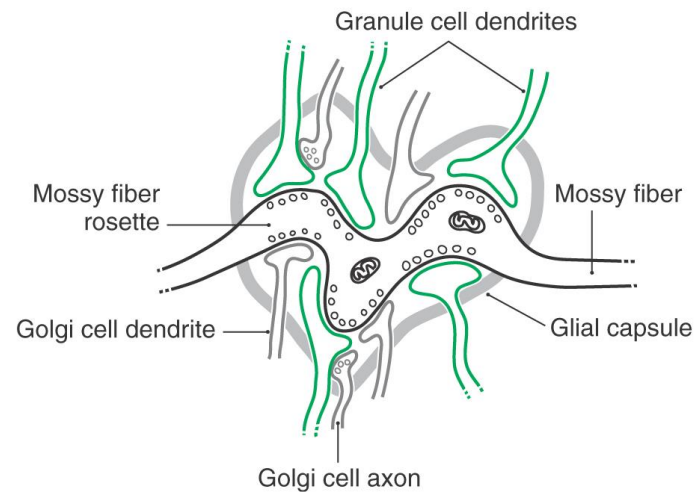
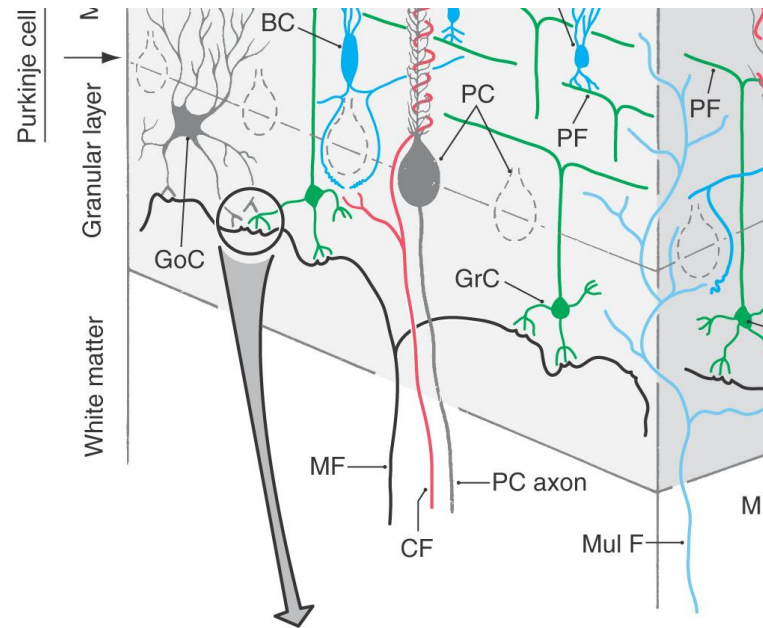


# Cytoarchitecture and Connections of the Cerebellum





# Cytoarchitecture and Connections of the Cerebellum



# Cytoarchitecture and Connections of the Cerebellum

