

CEREBELLUM

D.HAMMOUDI.MD

CEREBELLUM

Function: adjusting posture (semi-conscious, via red nucleus), program/fine tune voluntary & involuntary movements. Is *ipsilateral*

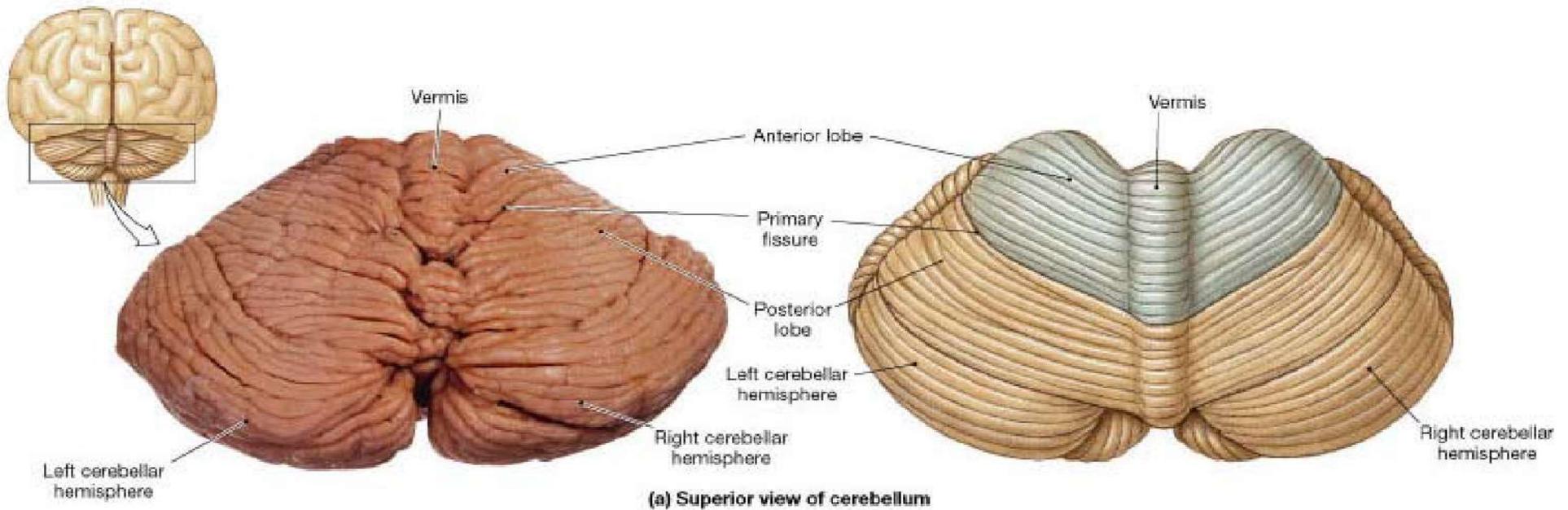
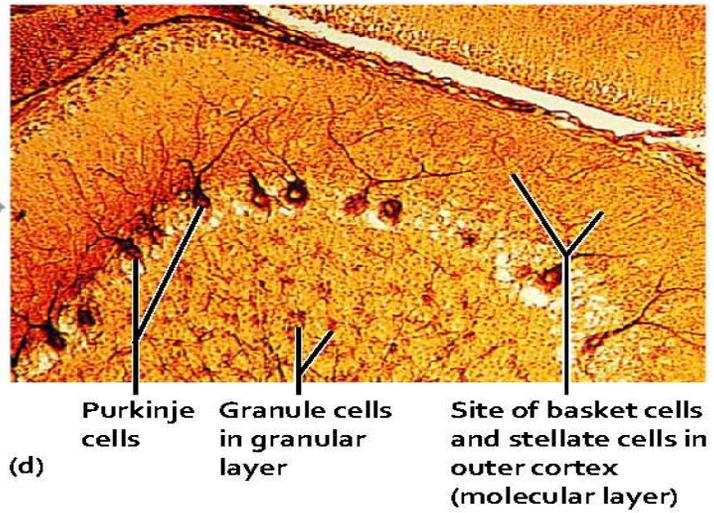
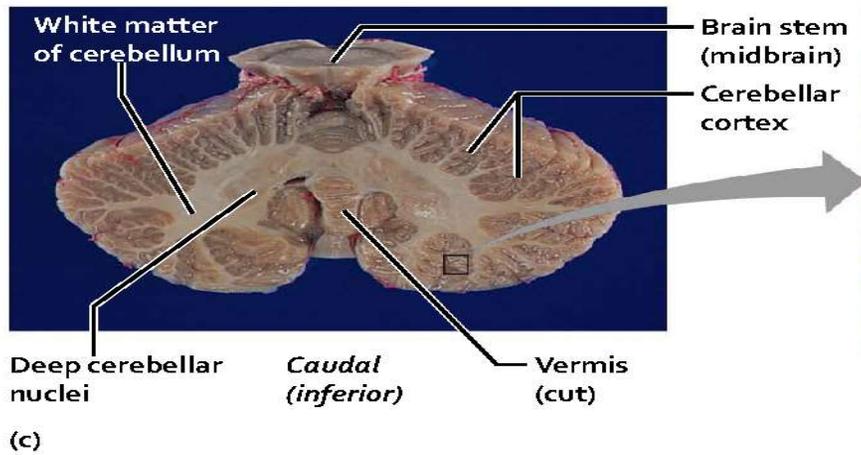
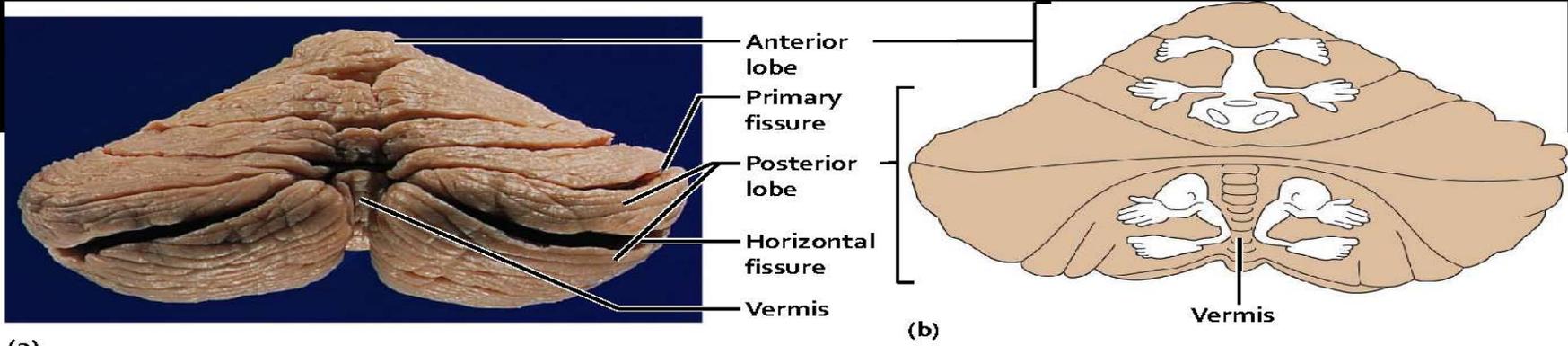


Figure 12.17: Cerebellum, p. 452.



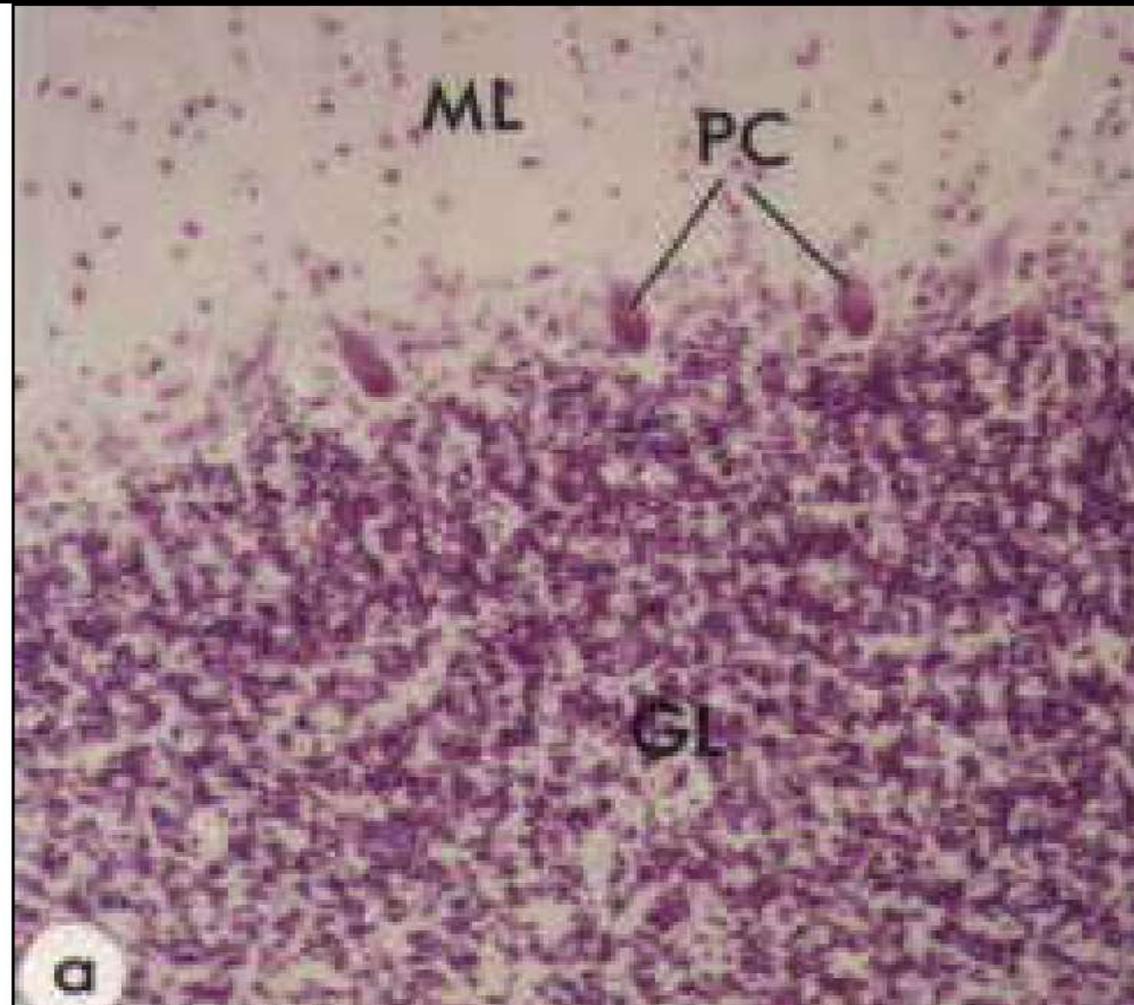
Cerebellum

Histology Lab Part 6: Slide 28



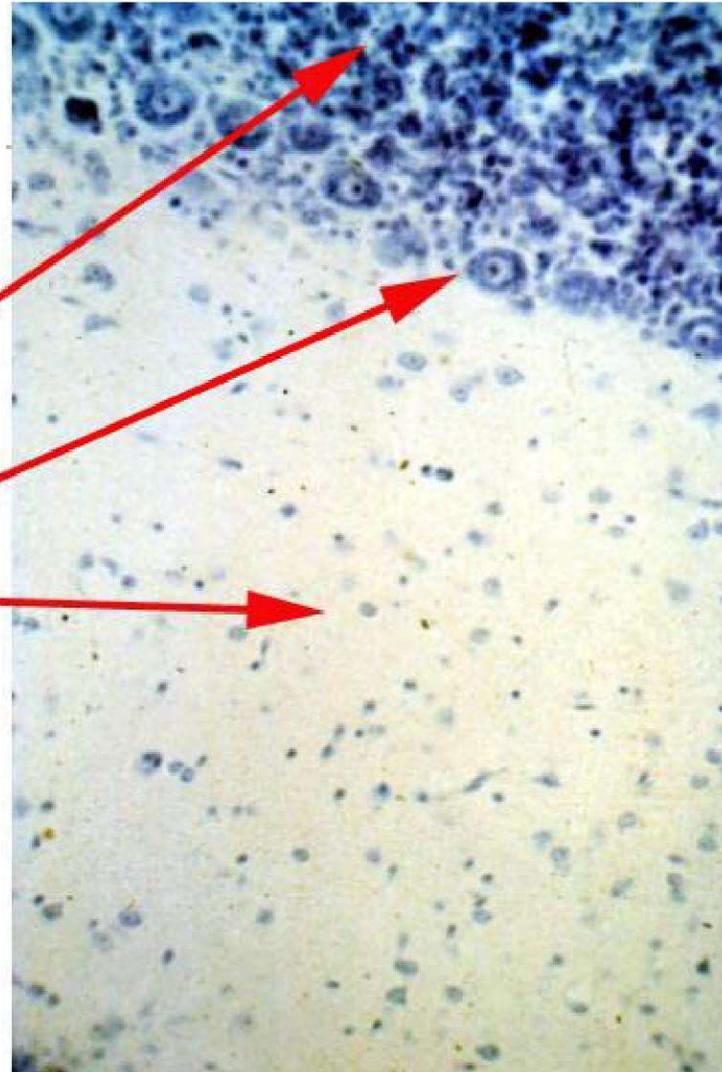
Cerebellum

- Cerebellar cortex consists of 3 layers
- Outer molecular (ML) – few neurons but abundant neuronal processes
- Inner granular layer (GL) with many densely packed granular cells
- Layer of Purkinje cells

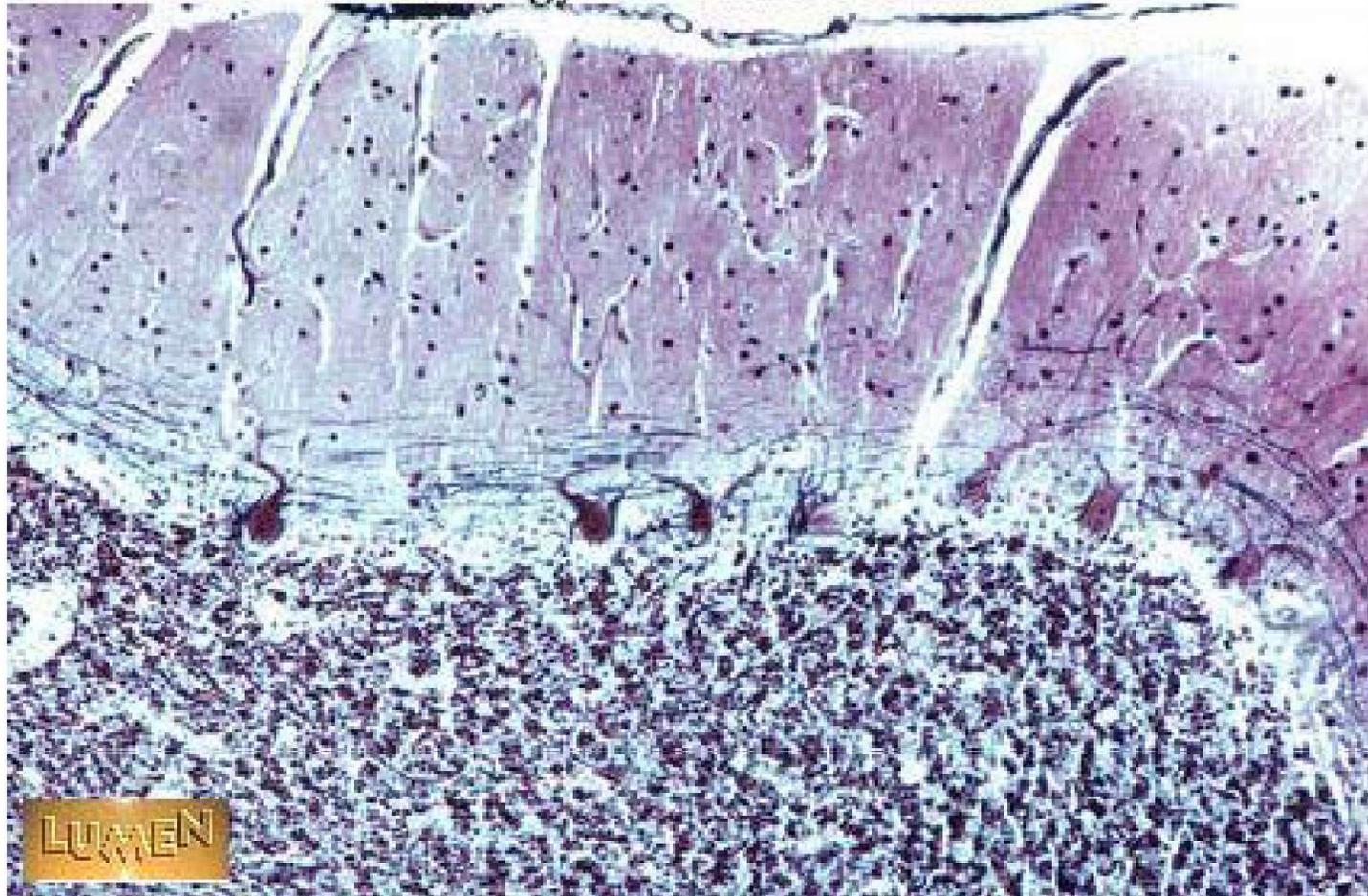


- Layers in the cerebellar cortex

- Granule layer
- Purkinje cell layer
- Molecular layer



Histology Lab Part 6: Slide 29



Functional and phylogenetic subdivision

© Brooks/Cole - Thomson Learning

Primary fissure

Regulation of muscle tone, coordination of skilled voluntary movement

Anterior Lobe

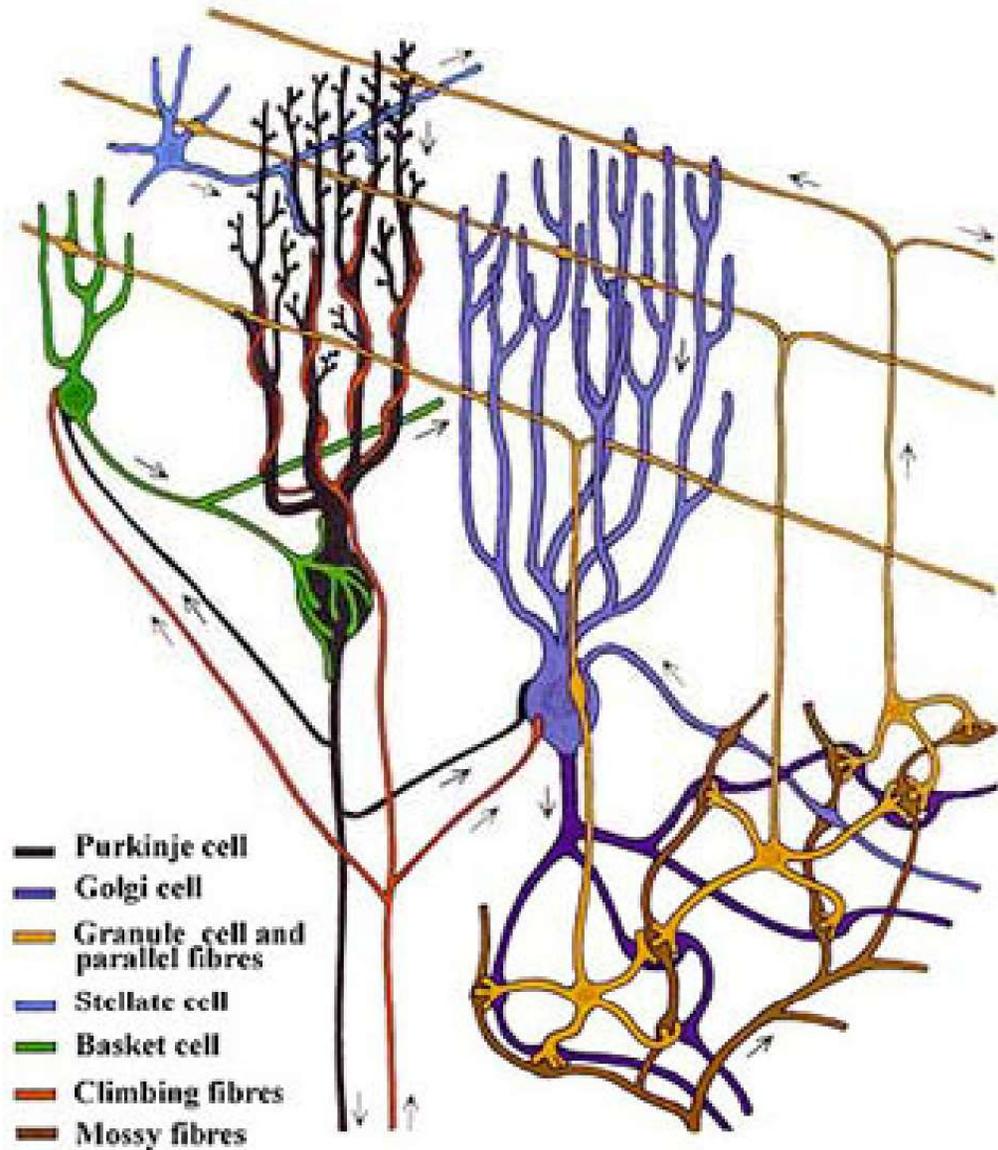
Posterior Lobe

Flocculo-Nodular Lobe (FN lobe)

Planning of voluntary activity

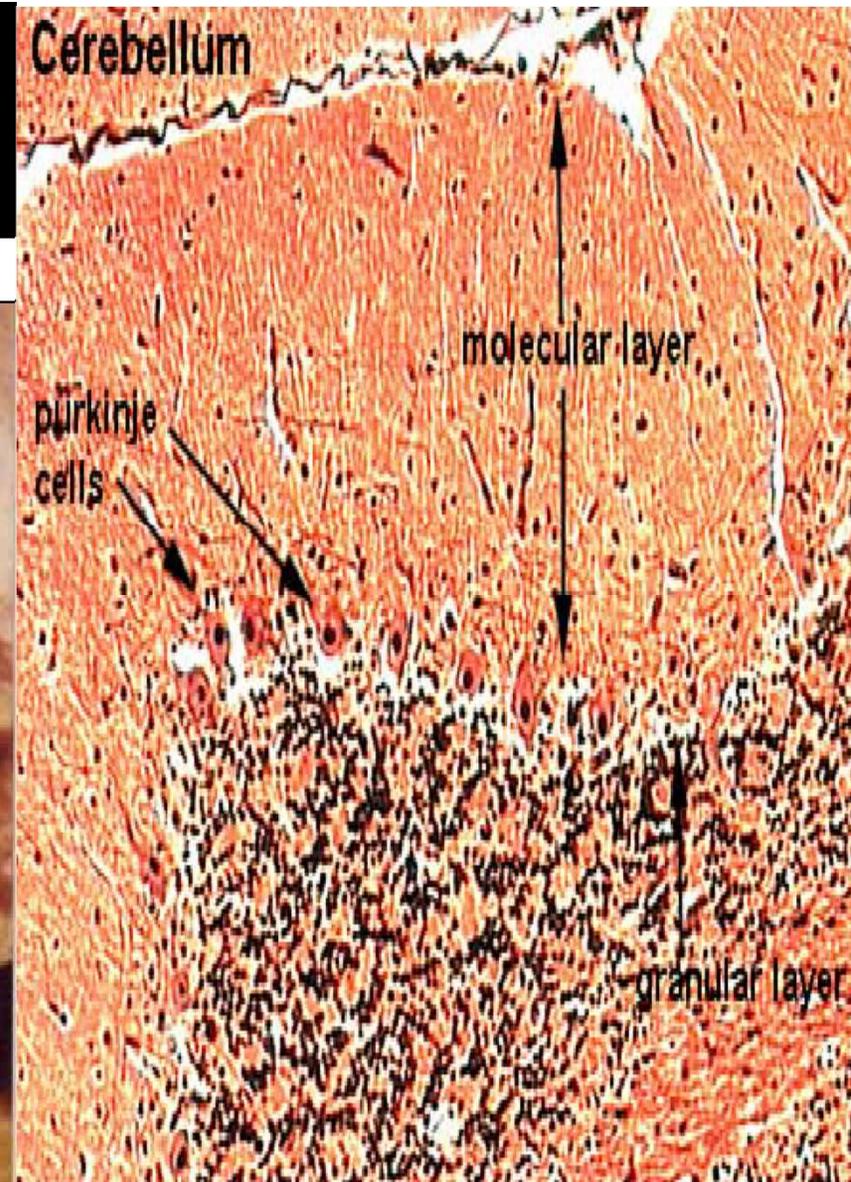
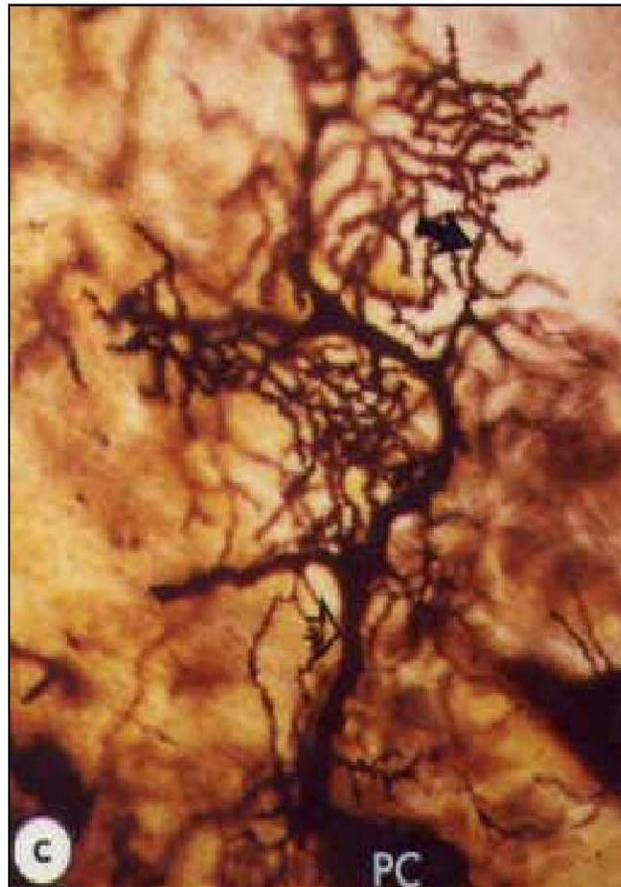
Maintenance of balance, control of eye movements

- Vestibulocerebellum/Archicerebellum
- Spinocerebellum/Paleocerebellum
- Cerebrocerebellum/neocerebellum

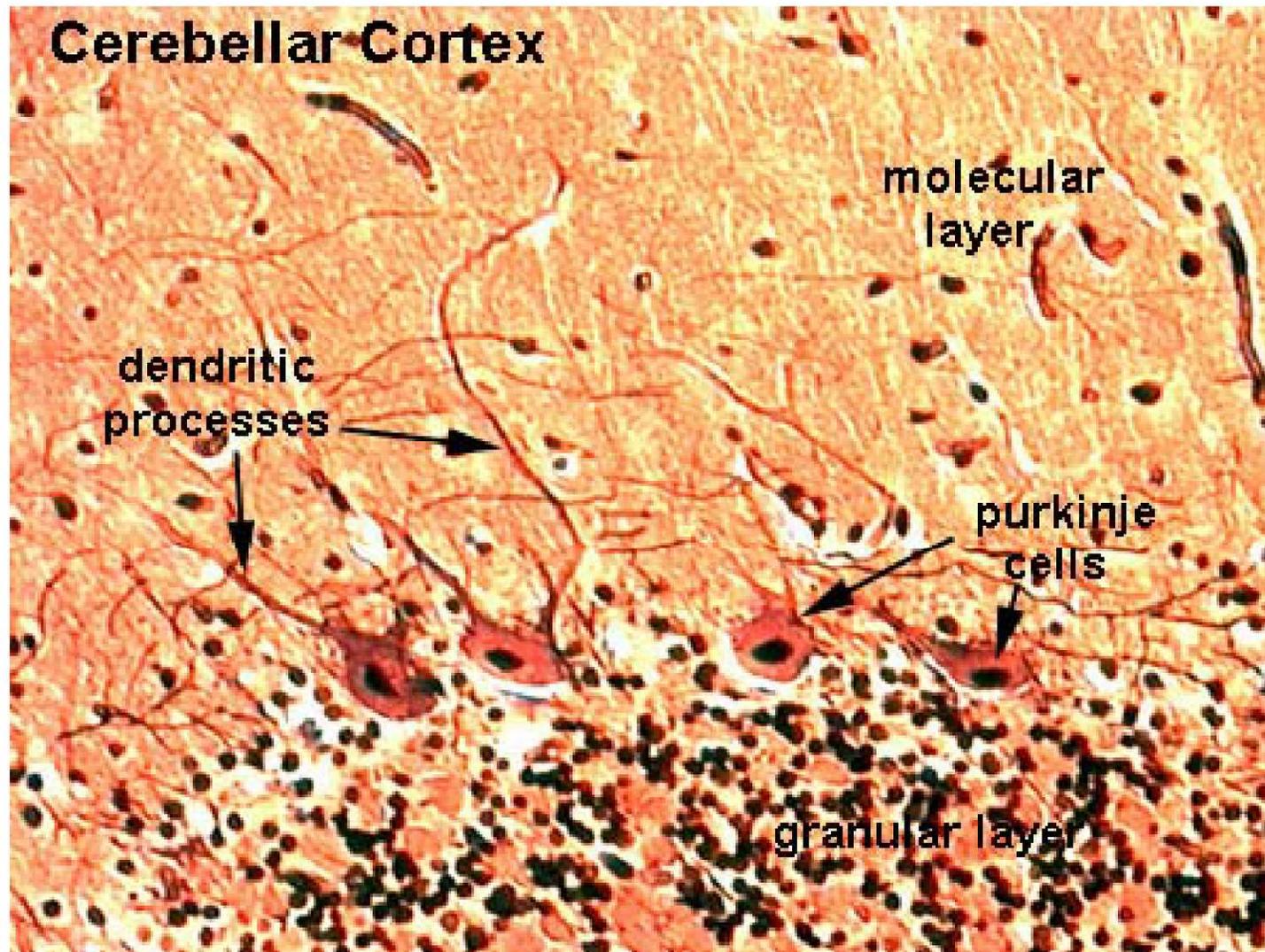


Cerebellum – Purkinje Cells

- Purkinje cell with elaborate dendritic tree
- Initial branches are larger & smooth with later (tertiary) branches spinous



Cerebellar Cortex



Golgi stain of Purkinje cell

