

HISTOLOGY OF THE CEREBRUM AND CEREBELLUM page 15

David B. Fankhauser, PhD

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http://biology.clc.uc.edu/fankhauser/Labs/Anatomy_&_Physiology/A&P202/CNS_Histology/Brain_Histology.htm

Follow *Notebook Illustrations* protocol. Replace clean slides in their proper slot in the slide box.

Examine the following slides, first surveying carefully to locate the best typical field showing listed features. Then illustrate each at the indicated power, identifying and labeling the listed features. At home, note the significance or function of each feature in a sentence or two.

Slide 2, **Cerebral Cortex, cat, pyramidal neurons, Ag stain**, (H 1490)
(MF 9th, page 105)

I. Cerebral Cortex, 40x: (Note large gyri)

MENINGES:

arachnoid meninx "spiderweb-like"
pia mater dark line adhering directly
to brain surface

CEREBRAL CORTEX:

molecular layer (superficial most)
granular layer (just below molecular)
pyramidal cells (primary motor neurons)
dendrites extend laterally

CEREBRAL MEDULLA:

white matter Contains myelinated fibers

II. Central Cerebral Cortex, 400x

Pyramidal cells
nucleus
dendrites
dendritic collaterals (collect impulses)
axon points medially from body
astrocyte (neuroglial cell)

Slide 3, **Cerebellum, cat, Purkinje Cells, Ag stain**, (H 1510)
(MF 9th, page 103.)

III. Cerebellum, 40x:

(Note numerous small gyri and arbor vitae)

pia mater
cortex (gray matter)
molecular layer (superficial most)
granular layer (just below molecular)
white matter

IV. Cerebellar cortex, 400x:

molecular layer:
outer stellate cells
parallel axons of granule cells
(extending from granular layer)

Purkinje cell layer:
Purkinje Cells:
dendrite (multibranched)
nucleus
axon (difficult to see)
axons of deep stellate (basket) cells
(alongside Purkinje cells)

granular layer:
granule cells (very numerous)
axon of Purkinje cell
myelinated fibers of white matter (deep)