

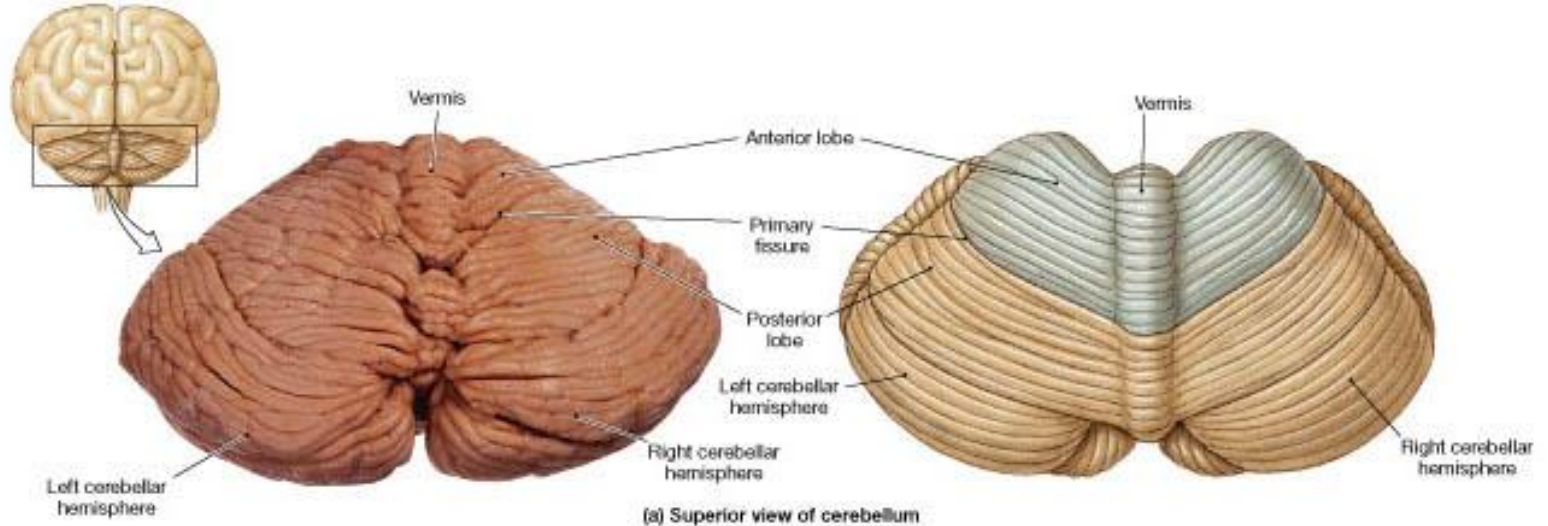
(a) Midsagittal section

CEREBELLUM

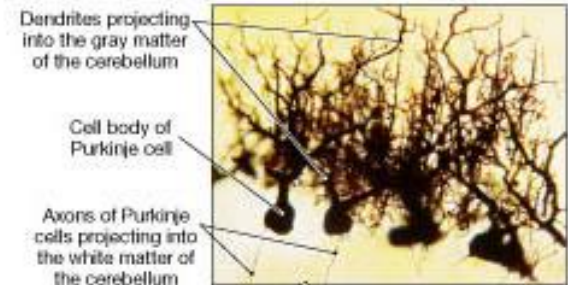
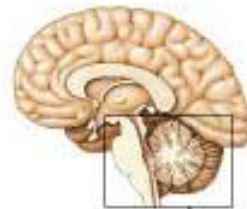
Dorsal and largest part of hindbrain

Lies in posterior cranial fossa

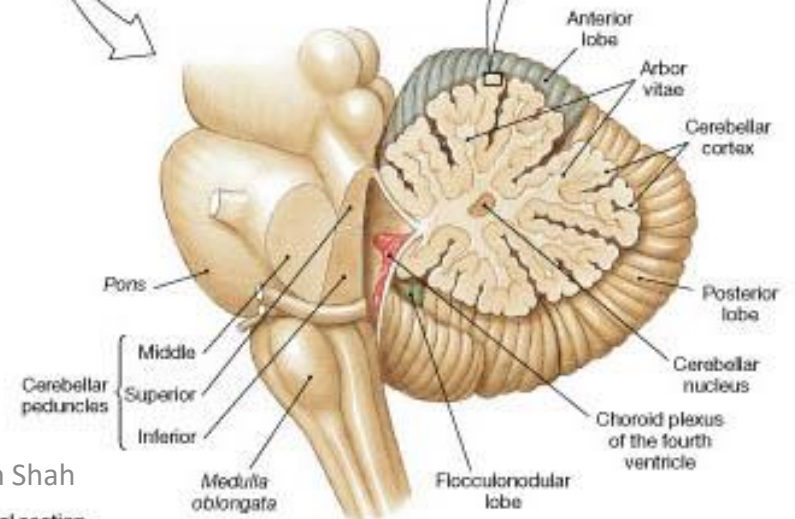
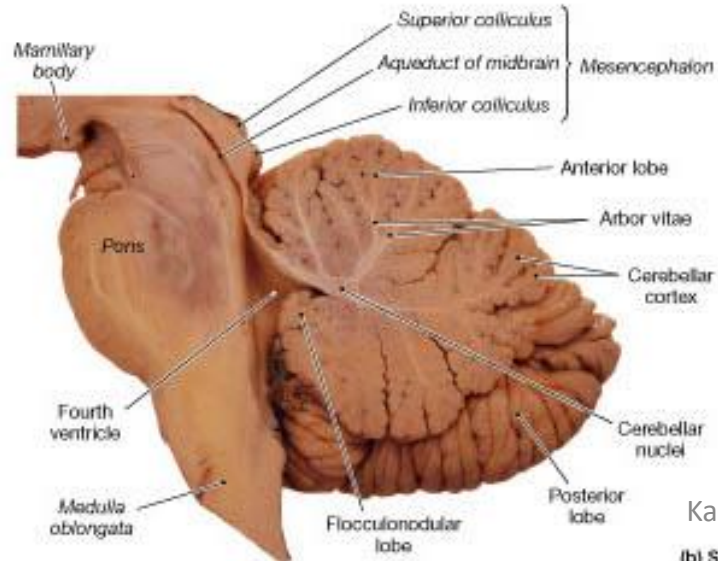
**HEAD GANGLION OF THE
PROPRIOCEPTIVE SYSTEM**



(a) Superior view of cerebellum



Purkinje cells




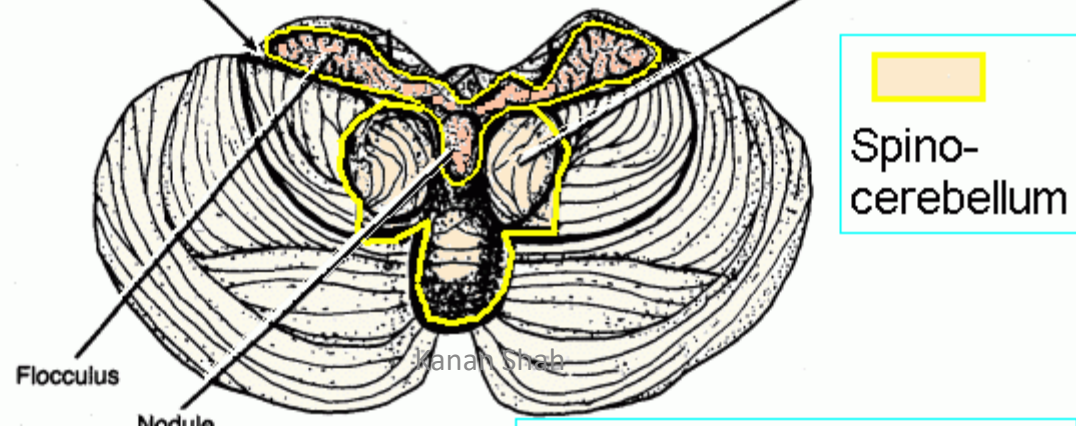
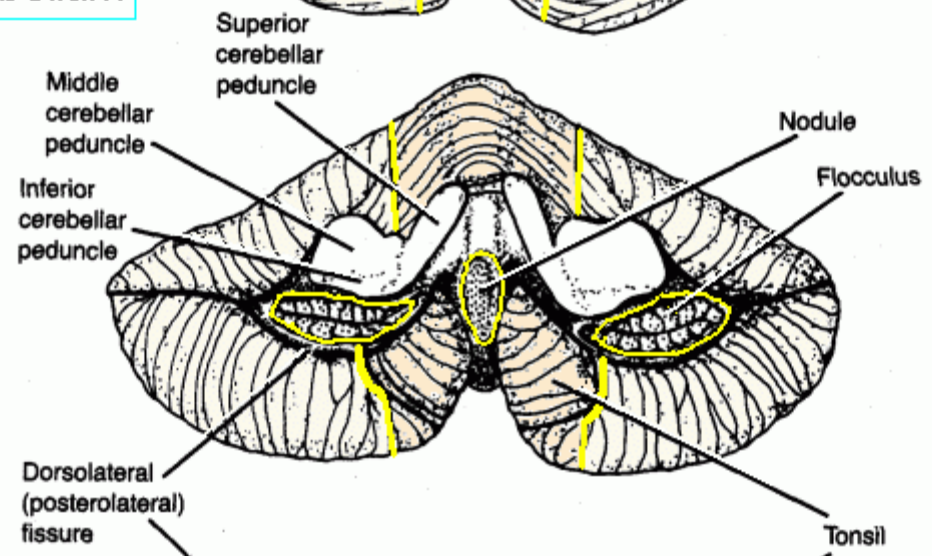
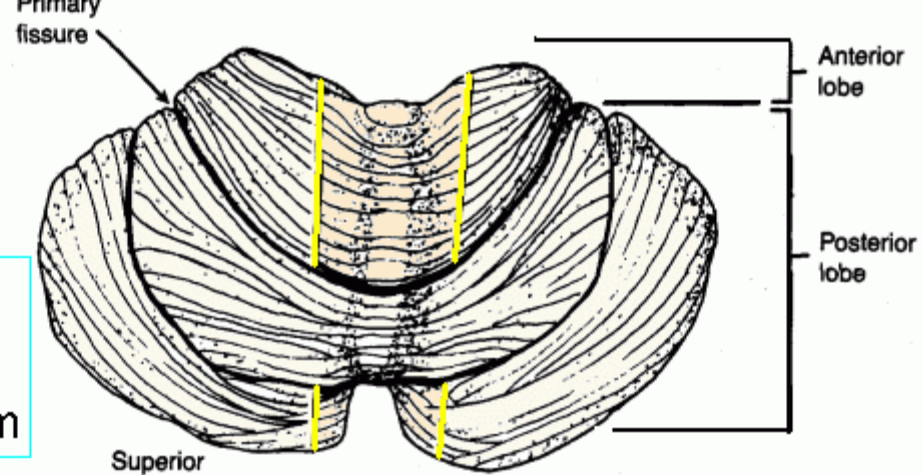
Kanan Shah

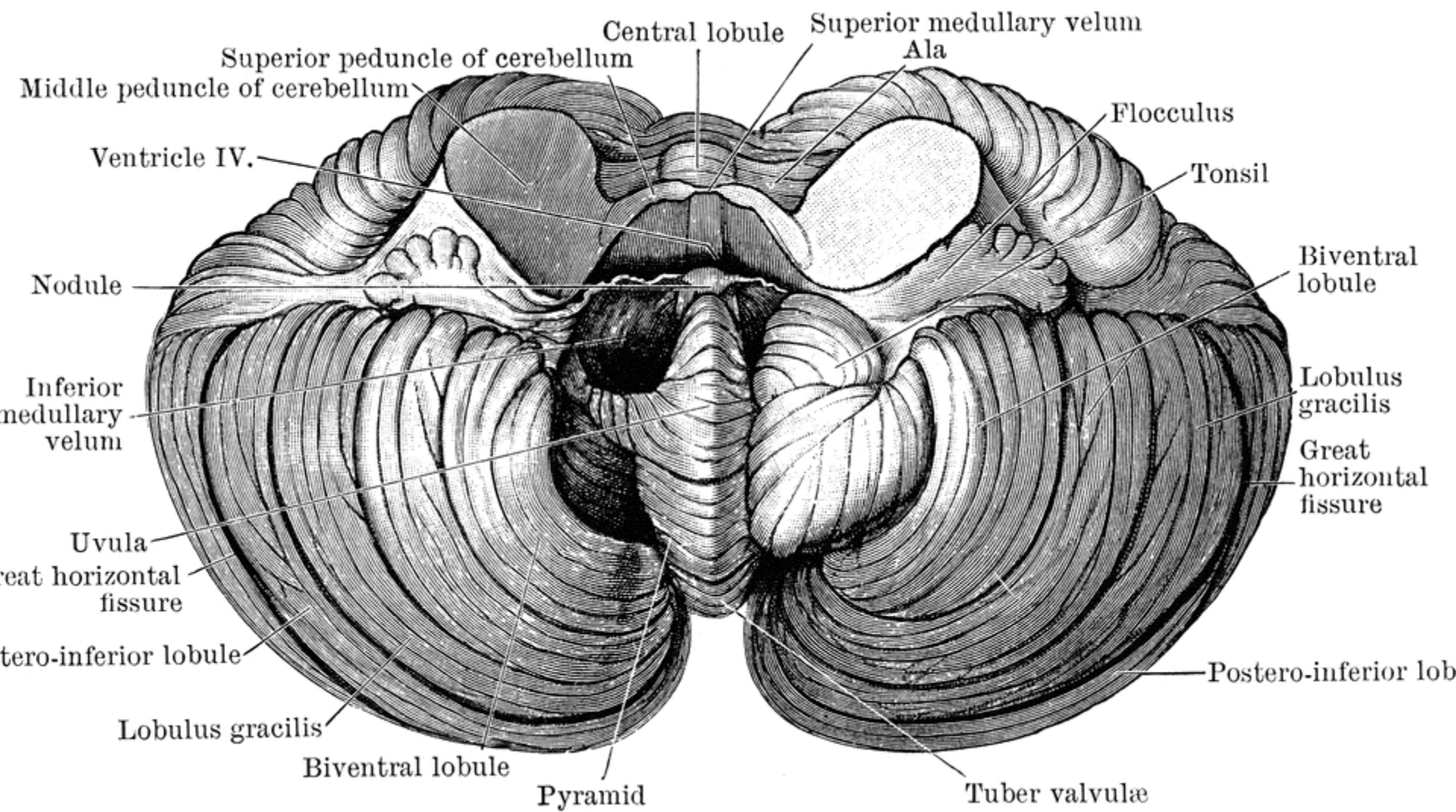
(b) Sagittal section

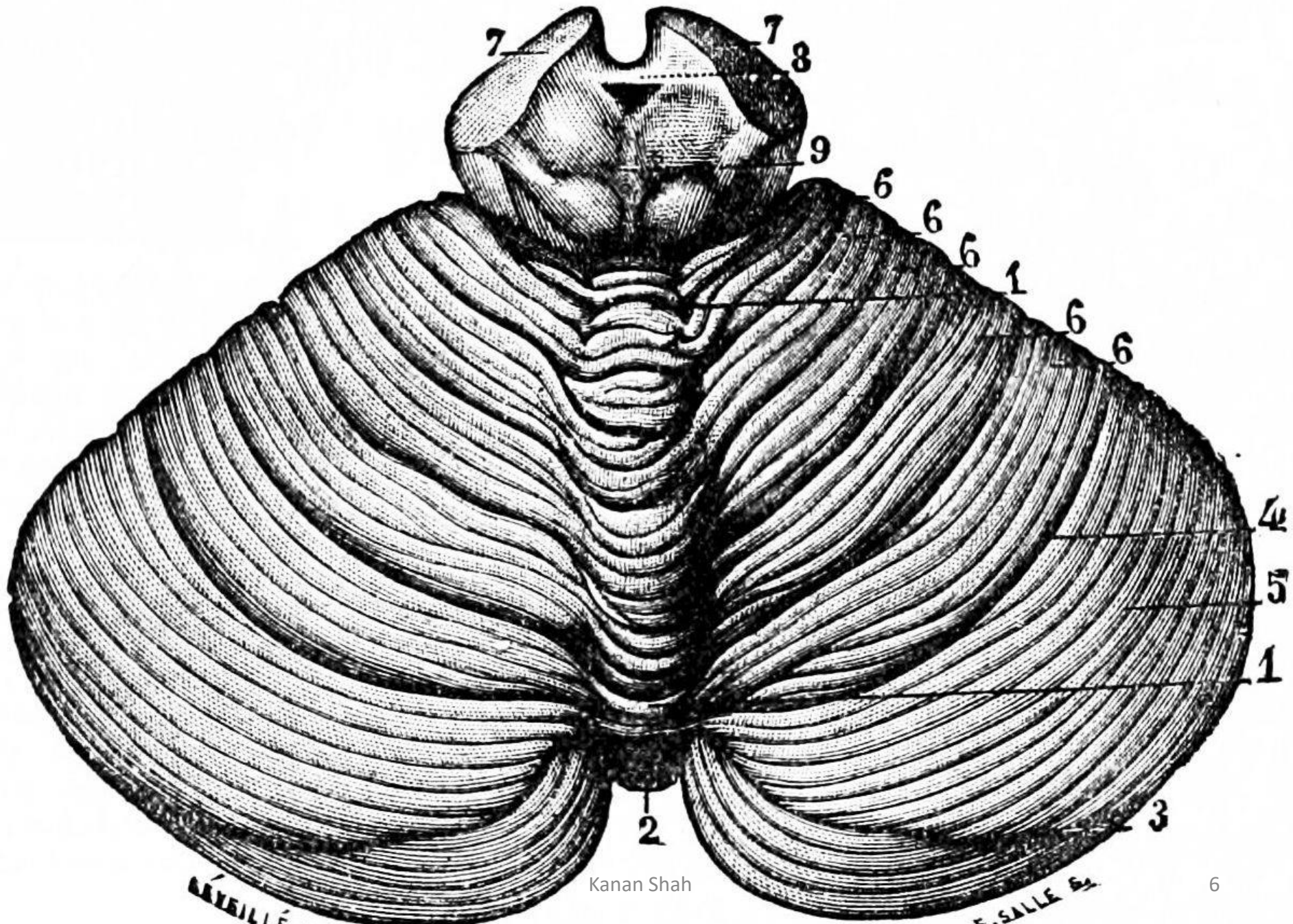
Features

- Cortical gray matter
- Medullary white matter
- Four pairs of nuclei
 - nucleus fastigios(roof nuclei)
 - nucleus globosus
 - nucleus emboliformis
 - nucleus dentatus
- Folia
- Fissures
- Arbor vitae cerebelli


 Ponto-
 cerebellum







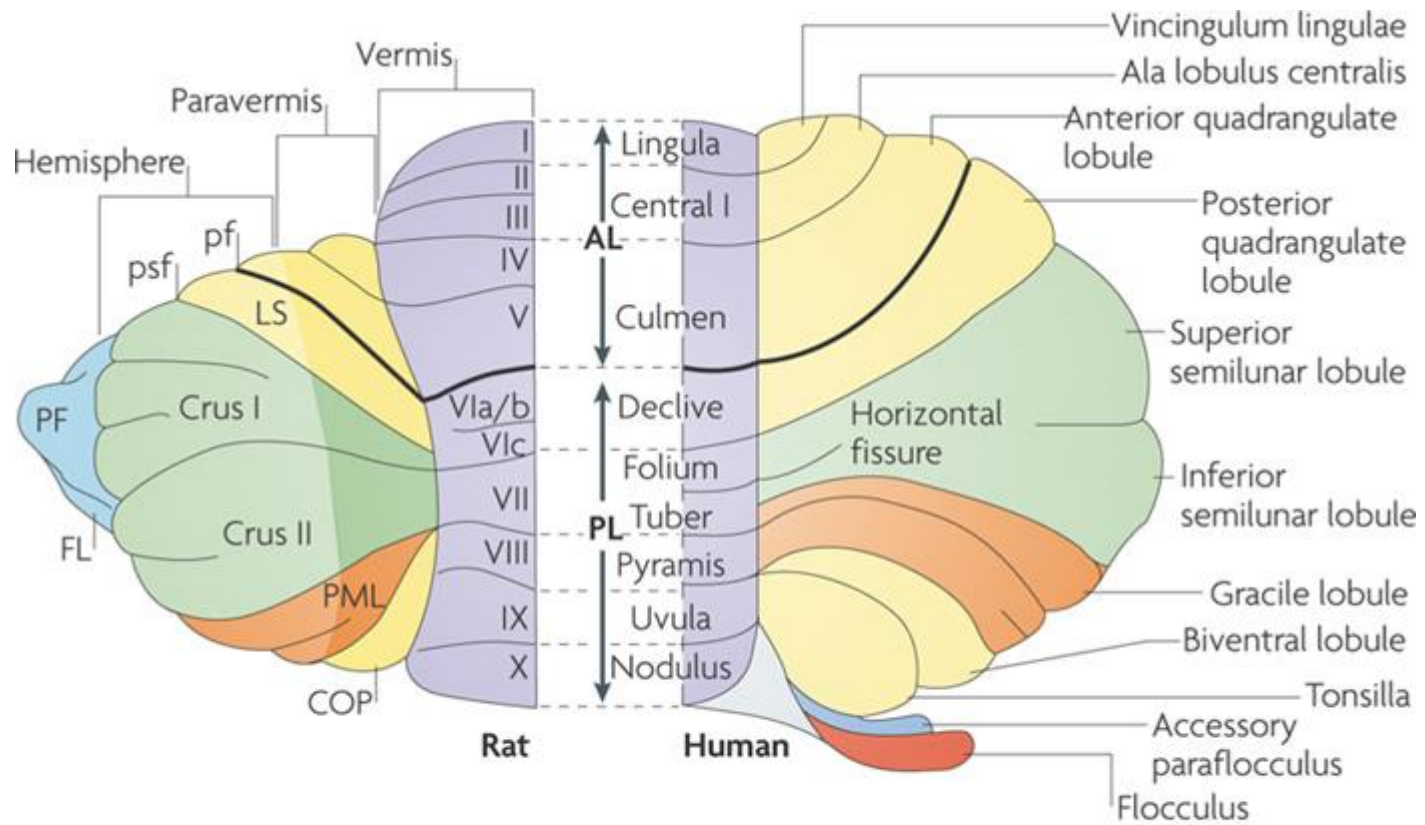
MAYILLÉ

Kanan Shah

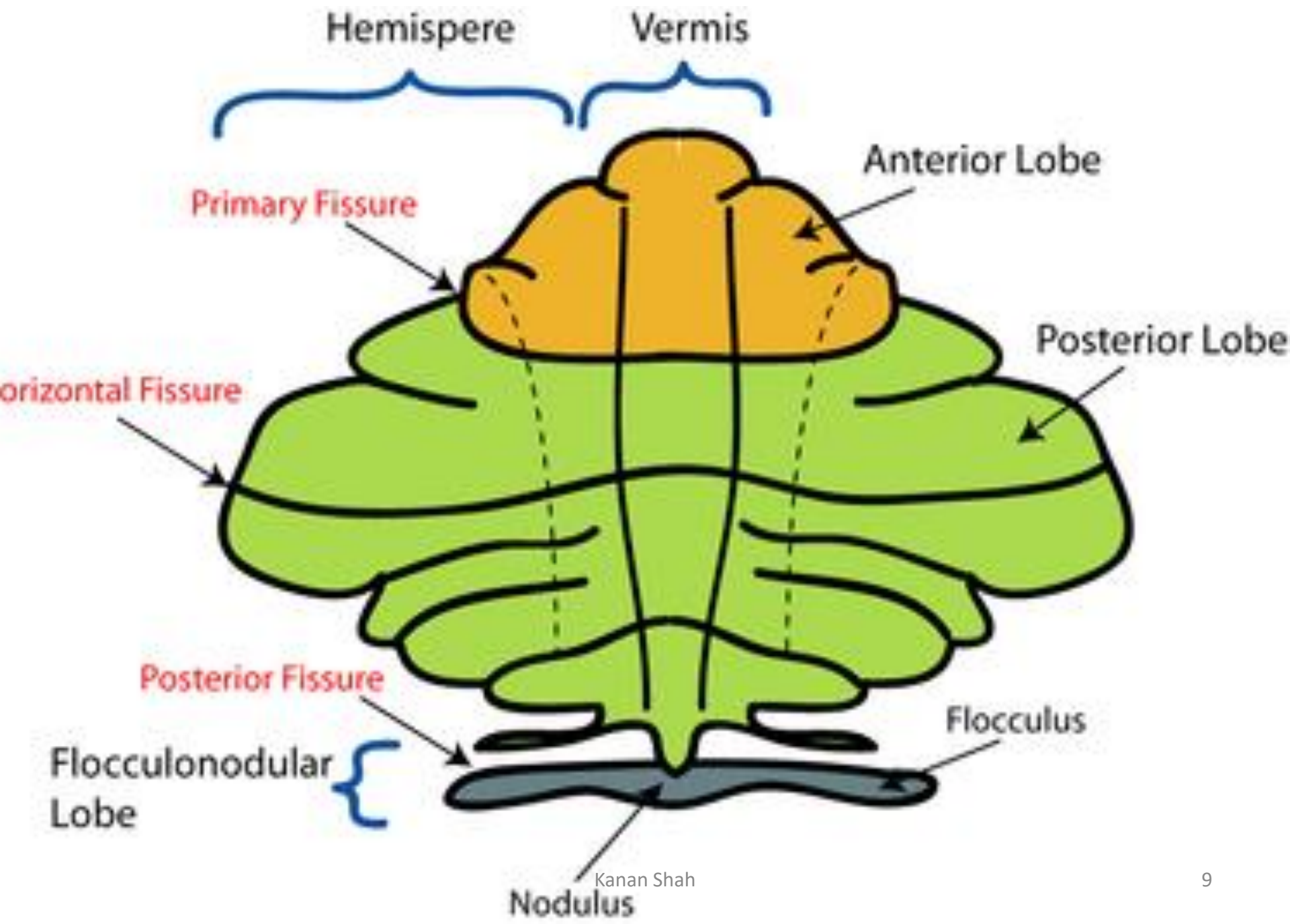
E. SALLE

Subdivisions

- Two hemisphere
- Vermis
- Horizontal fissure
- Vallecula
- Posterolateral fissure
- Flocculo-nodular lobe
- Corpus cerebelli
- Primary fissure



Nature Reviews | **Neuroscience**



VERMIS

HEMISPHERE

Ant. Lobe

Lingula.....no lat.projection
 central lobule.....alae
 culmen.....quadrangular lobule

PRIMARY FISSURE

Declive.....simple lobule
 Folium.....sup.semilunar lobule

HORIZONTAL FISSURE

Post.lobe

Tuber.....Inf.semilunar lobule
 Pyramid.....biventral lobule

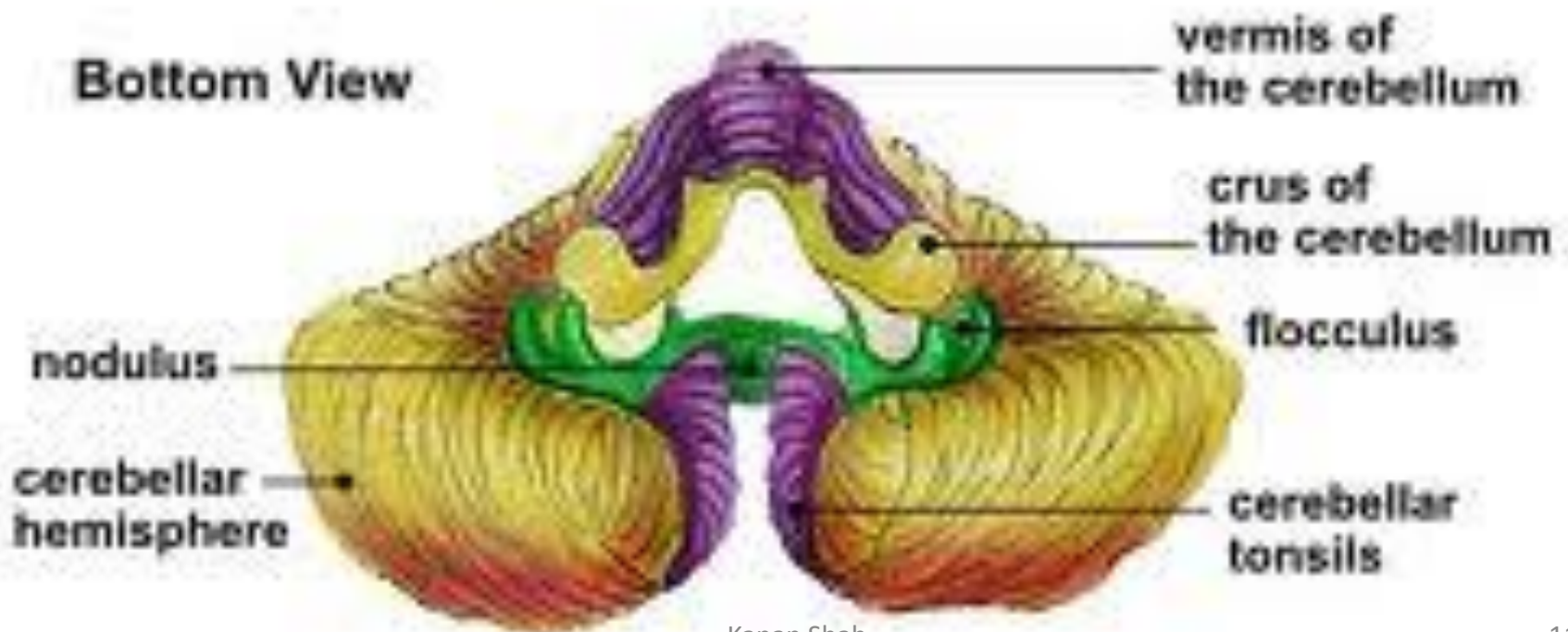
SECONDARY FISSURE

Uvula.....tonsil

POSTERO-LATERAL FISSURE

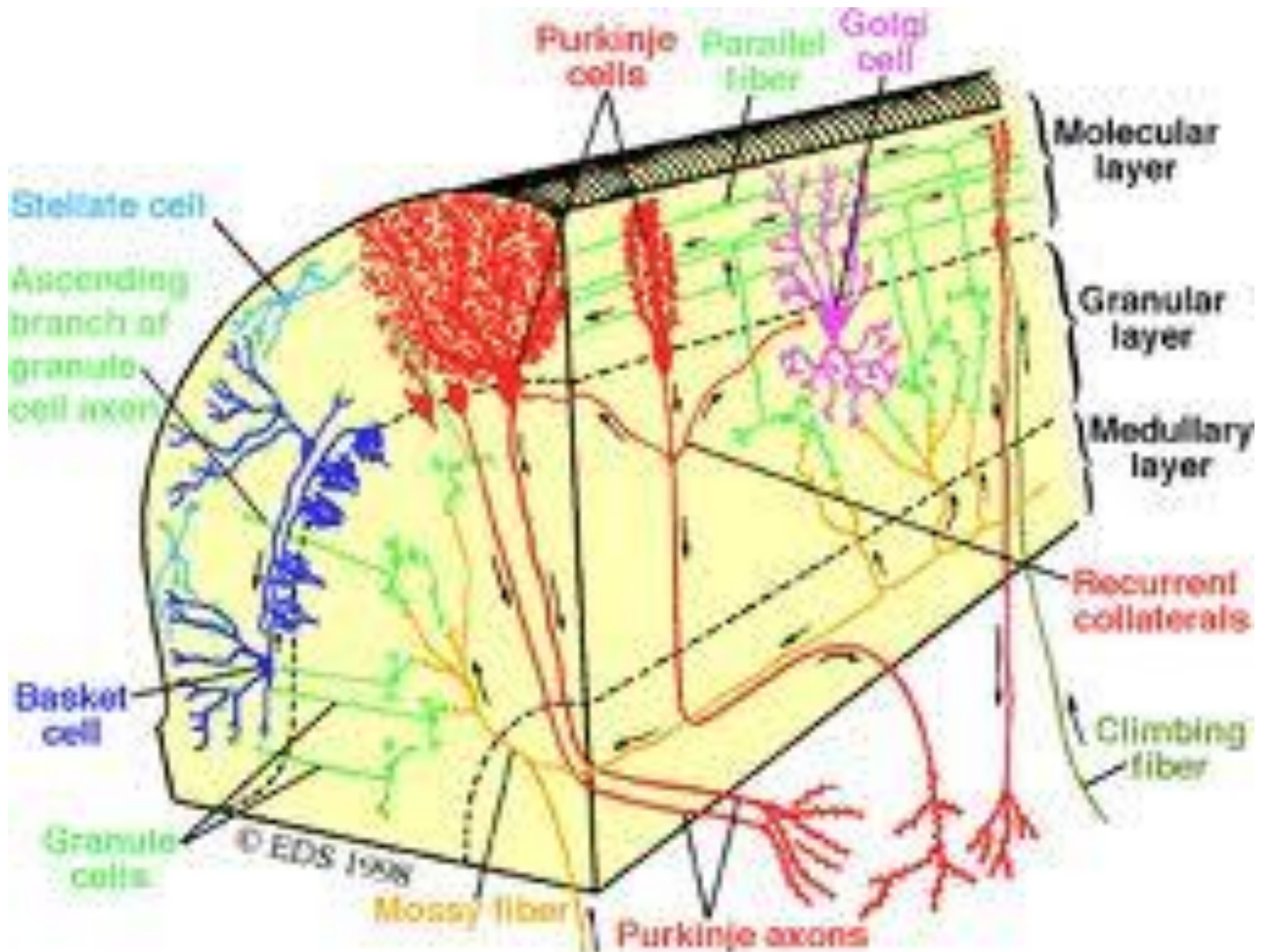
Flocculonodular lobe

nodule.....flocculus



Morphological subdivision

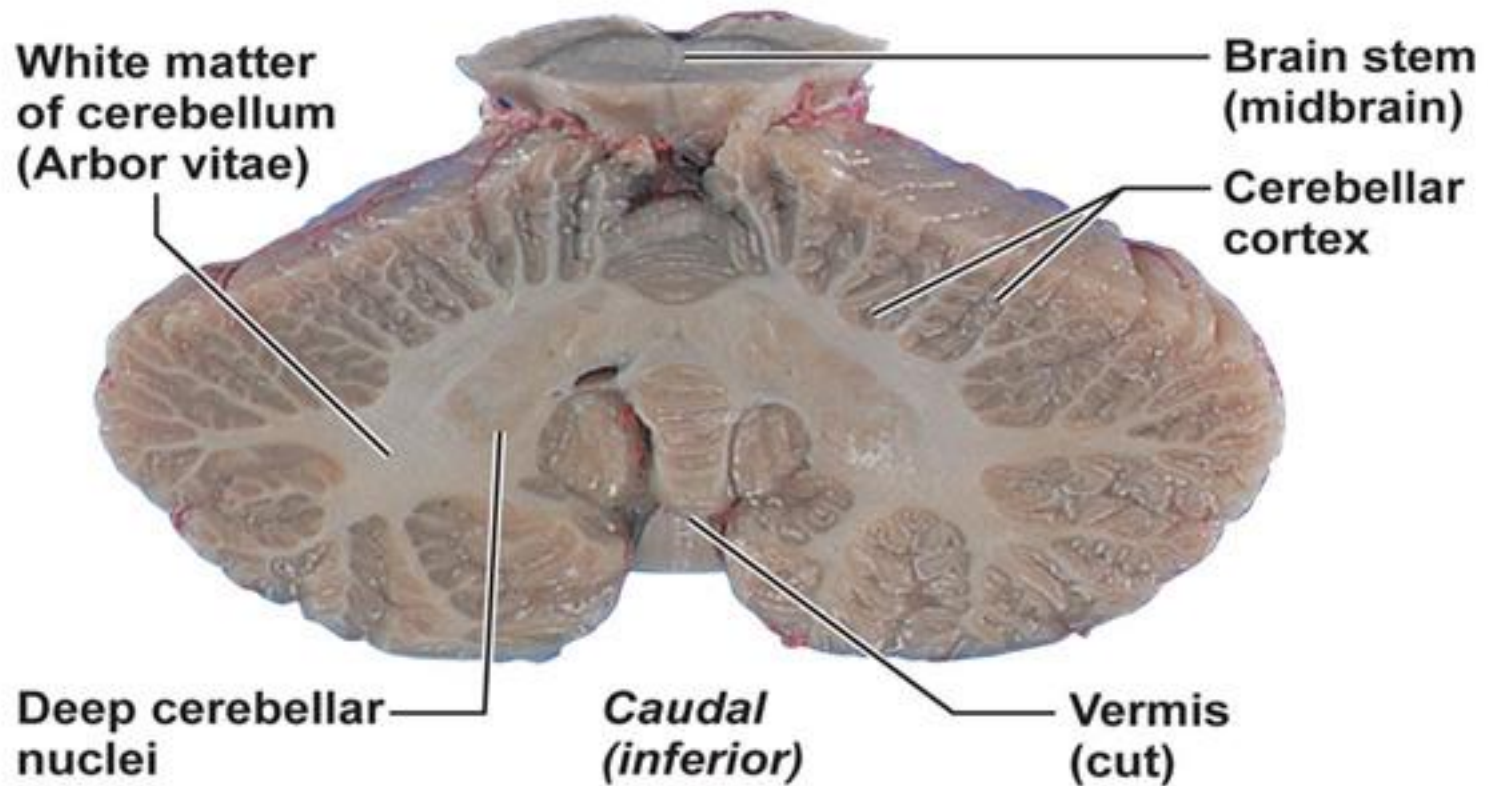
- Archicerebellum(vestibular cerebellum)
- Paleocerebellum(spinal cerebellum)
- Neocerebellum (cerebro-pontine cerebellum)



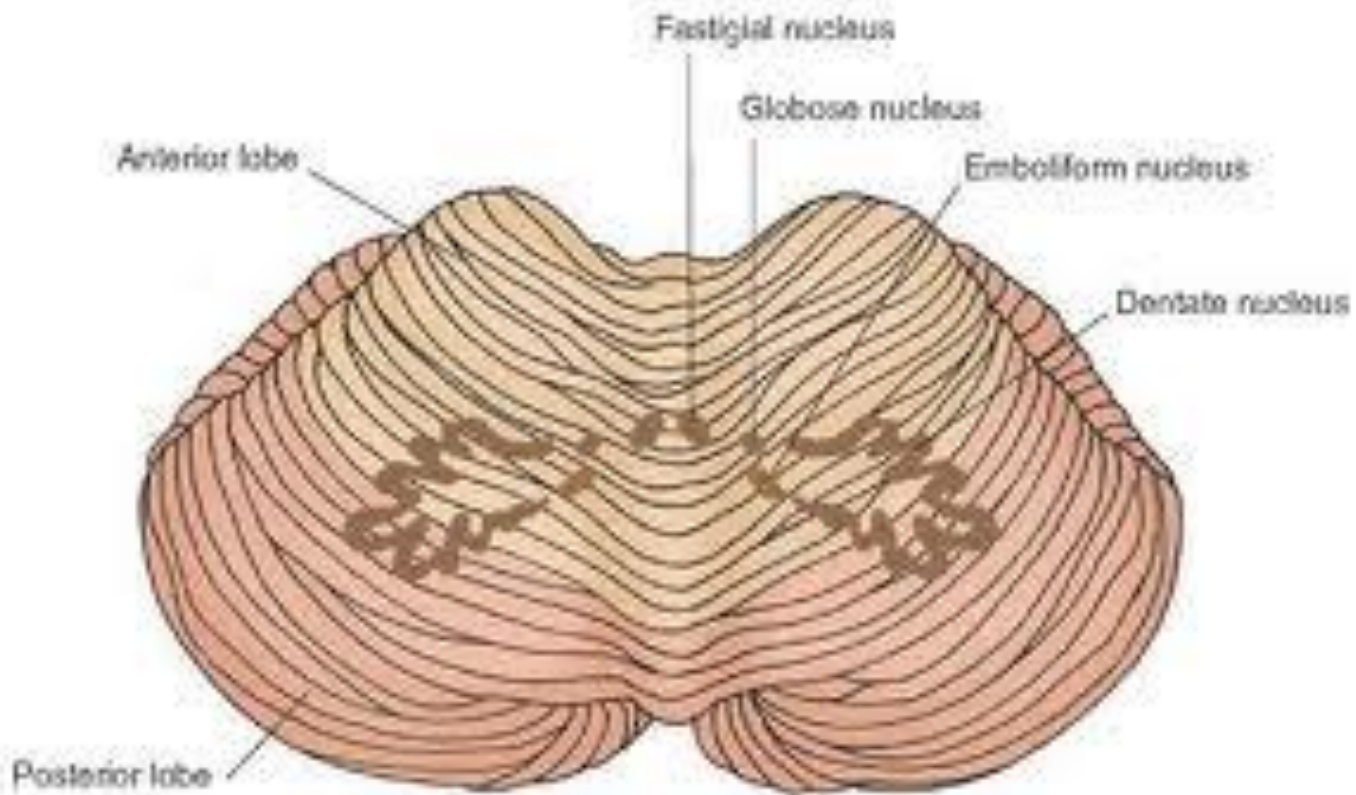
Functional subdivision

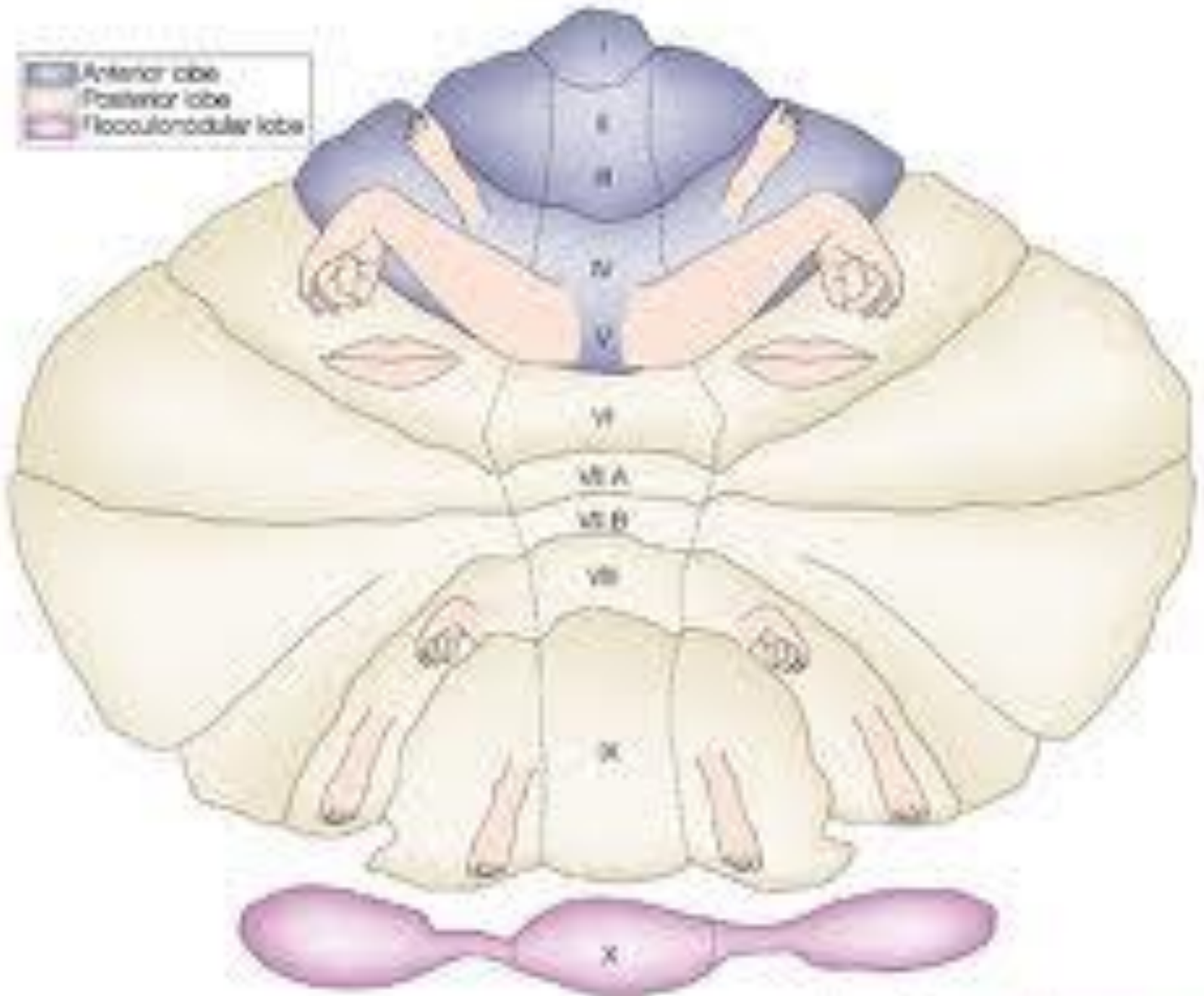
- Vermal
- Paravermal
- Lateral(hemisphere)

The Cerebellum – White and Gray Matter



(d) Coronal section, posterior view





Functions

- Vermal & floclonodular lobe—
concerned with body equilibrium
- Paravermal region—
regulate locomotion & movements of
exploratory nature.
- Hemisphere---
supervise skilful learned movements of
exploratory nature.

Applied anatomy

- Archicerebellum syndrome
 - cause—medulloblastoma of flocculonodular lobe
 - symptoms—disturbance of equilibrium
 - walks on a wide base
 - sways from side to side
 - unable to maintain upright posture

- Paleocerebellar syndrome

Cause—excessive intake of alcohol
in malnutrition

symptoms---ataxia of gait

- Neocerebellar syndrome----

hypotonia

Asynergia-

Ataxia

Dysmetria

Decomposition of movements

Dysdiadochokinesis

Rebound phenomenon

Dysarthria

Nystagmus

Intention tremor

Aknowledgement

- Essentials of Head, Neck & Brain
AsimKumar Dutta
- Human Anatomy –B D Chaurasia