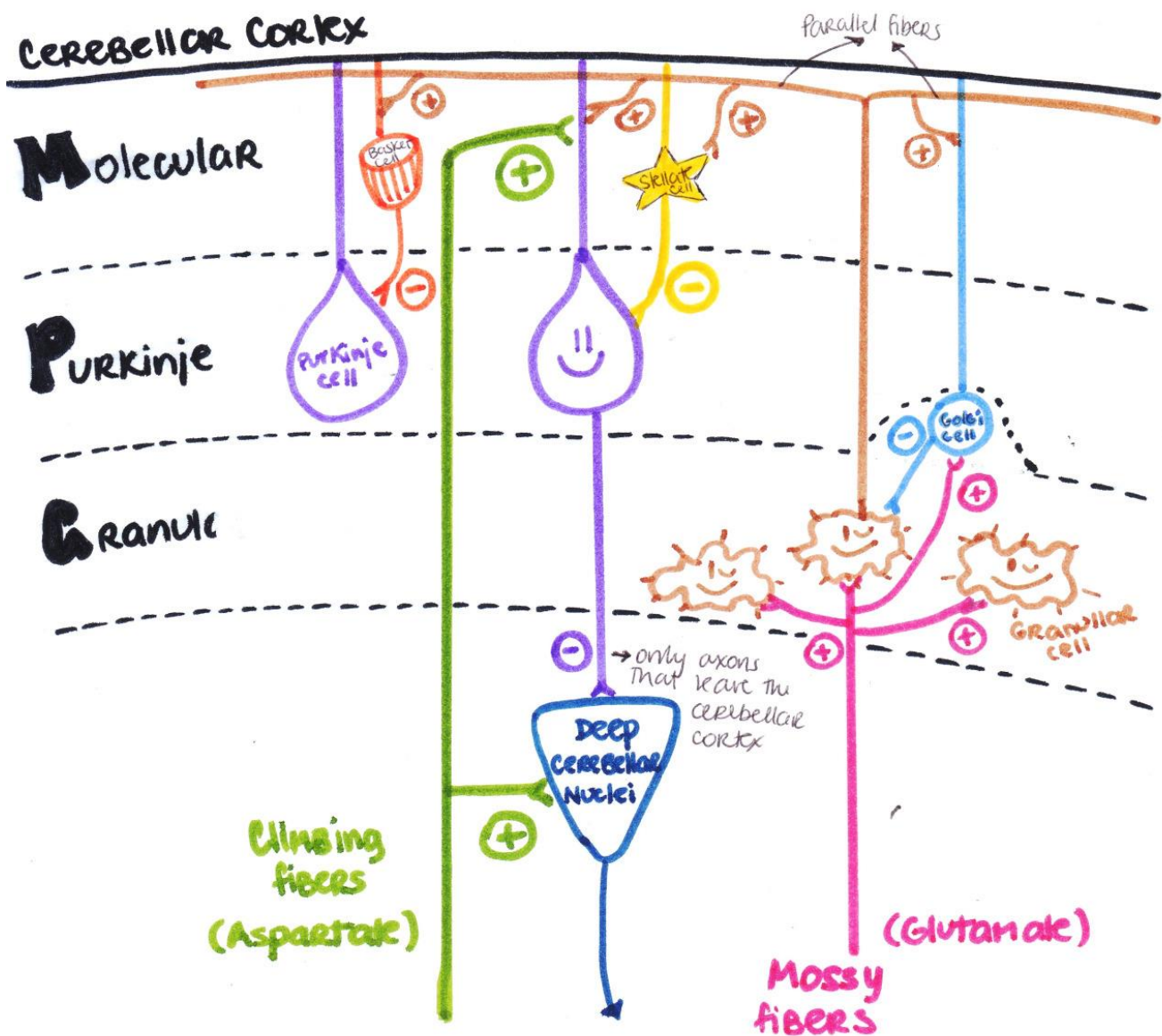


CEREBELLUM

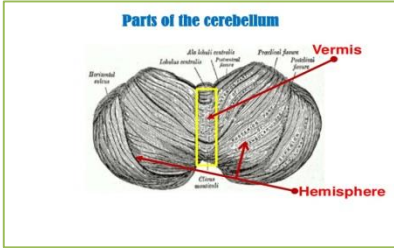
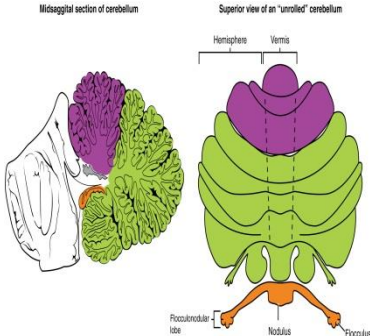
ملاحظة:

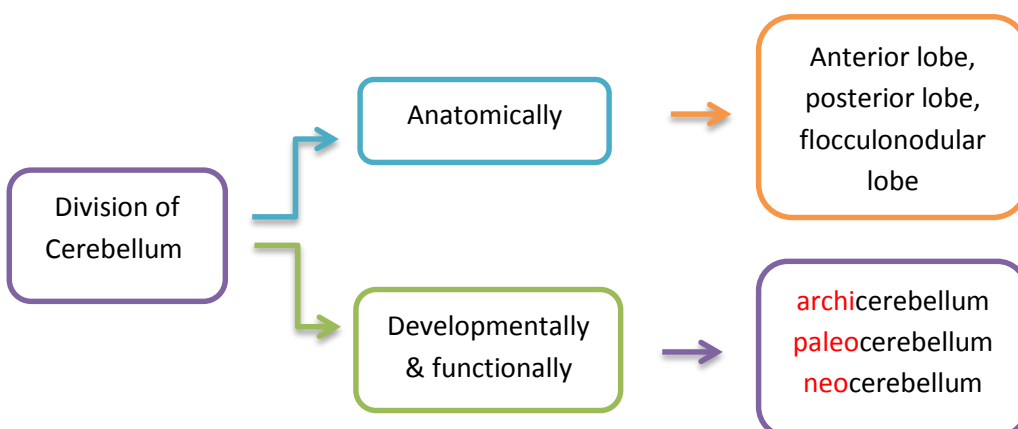
هذا الملف للمراجعة وترتيب المعلومات فقط وليس مرجع للمذاكرة لانه ليست كل المعلومات متضمنة.



Done by:

شيخة الدوسري

Anatomical of cerebellum	External features	internal features
	<ul style="list-style-type: none"> • two Cerebellar Hemispheres joined in midline by the Vermis • Its surface is highly convoluted forming Folia, separated by Fissures.  <p style="text-align: center;">Parts of the cerebellum</p>	<p><u>cerebellar cortex</u> : is Outer grey matter.</p> <ul style="list-style-type: none"> ♣ <u>Divided into 3 layers</u>: <ol style="list-style-type: none"> 1. Outer molecular layer 2. Intermediate Purkinje cell layer 3. Inner granular layer
	<ol style="list-style-type: none"> 1. Anterior lobe: in front of primary fissure, on the superior surface. 2. Posterior (middle) lobe: <u>behind primary fissure</u> (Between Primary & Secondary fissures = posterolateral). 3. Flocculonodular lobe: <u>in front of secondary</u> (Posterolateral) fissure, on the inferior surface  <p style="text-align: center;"><small>Midsagittal section of cerebellum Superior view of an "unrolled" cerebellum</small></p>	<p><u>Cerebellar medulla</u> : is inner white matter</p> <p>Has deeply nuclei in white matter :</p> <p>From medial to lateral</p> <p><u>Fastigial nucleus</u>. <u>Globose nucleus</u>. <u>Emboliform nucleus</u>. <u>Dentate nucleus</u>: largest one</p>



Functional of Cerebellum	ARCHICEREBELLUM	PALEOCEREBELLUM	NEOCEREBELLUM
Part of cerebellum	<u>Vestibular</u> Part	<u>Spinal</u> Part	<u>Cerebral</u> Part
Location on cerebellum	Flocculonodular lobe	Vermis & Paravermis	Rest of Cerebellum
Afferents	from <u>Vestibular nuclei</u> (<u>Vestibulocerebellar fibres</u>), (through ICP)	from <u>spinal cord</u> (<u>dorsal & ventral spinocerebellar tracts</u>) through ICP & SCP, respectively)	from <u>Pons</u> (<u>Pontocerebellar fibres</u>) (through MCP)
Nuclei Related	Fastigial	globose & emboliform	Dentate
Efferents	to <u>Vestibular nuclei</u> (through ICP) + to <u>Reticular formation</u>	to <u>red nucleus</u> (through SCP)	to <u>Red nucleus</u> but mostly to <u>Ventral Lateral Nucleus of Thalamus</u> (through SCP) then to motor cortex
Function	controls body Balance (via vestibulospinal & reticulospinal tracts)	influences posture & muscle tone (via Rubrospinal tract)	coordination of voluntary movements (via descending corticospinal & corticobulbar tracts).

CEREBELLAR LESIONS:

MIDLINE LESION: Loss of postural control.

UNILATERAL LESION: "Cerebellar ataxia"

causes *ipsilateral*:

Incoordination of arm: intention tremors (on performing voluntary movements)

Incoordination of leg: unsteady gait

Incoordination of eye movements: nystagmus

Slowness of speech: dysarthria