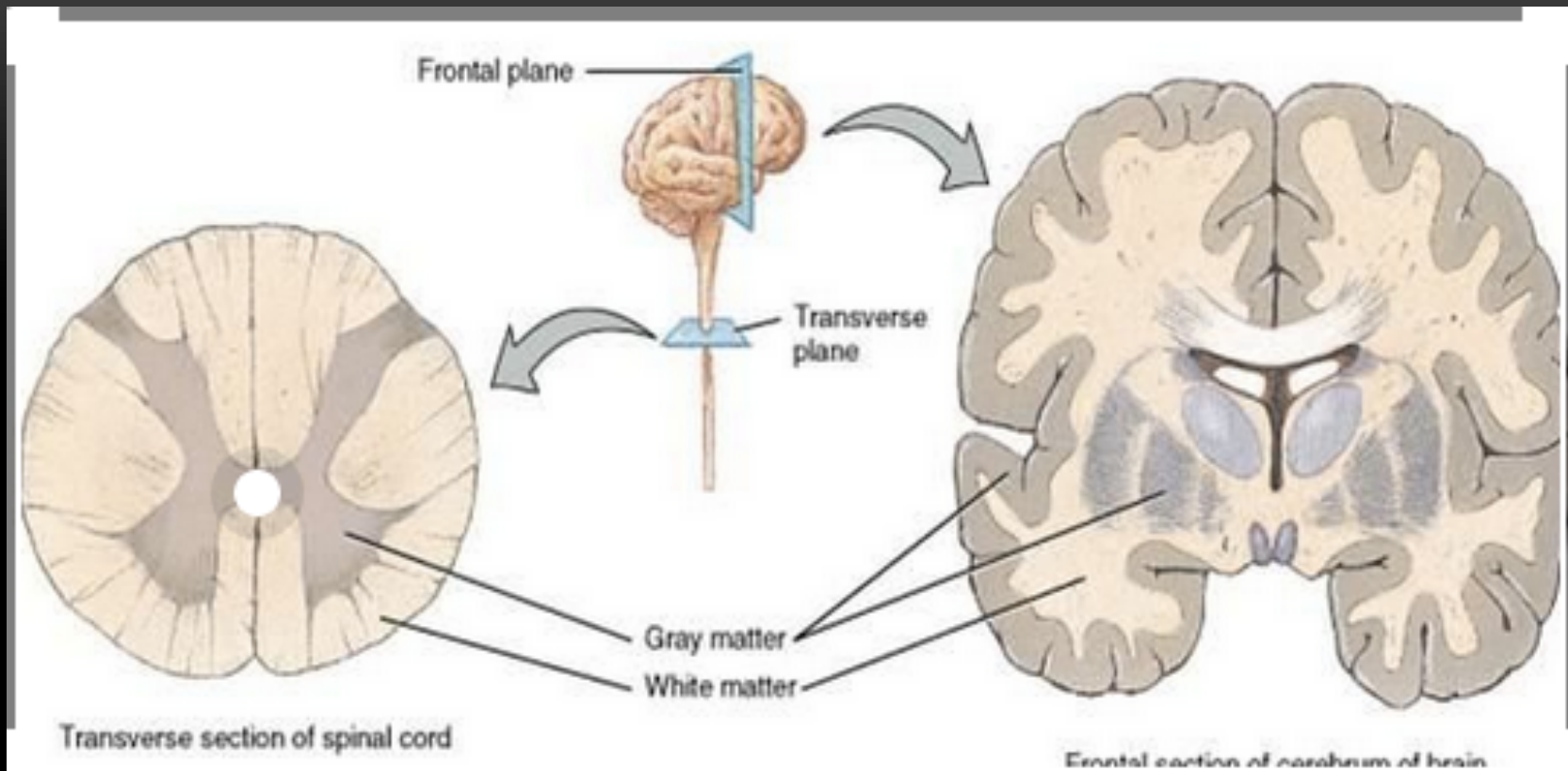


Tecido Nervoso - Morfologia microscópica



-Sistema Nervoso Central (encéfalo e medula espinhal)

-Sistema Nervoso Periférico (nervos e gânglios nervosos)

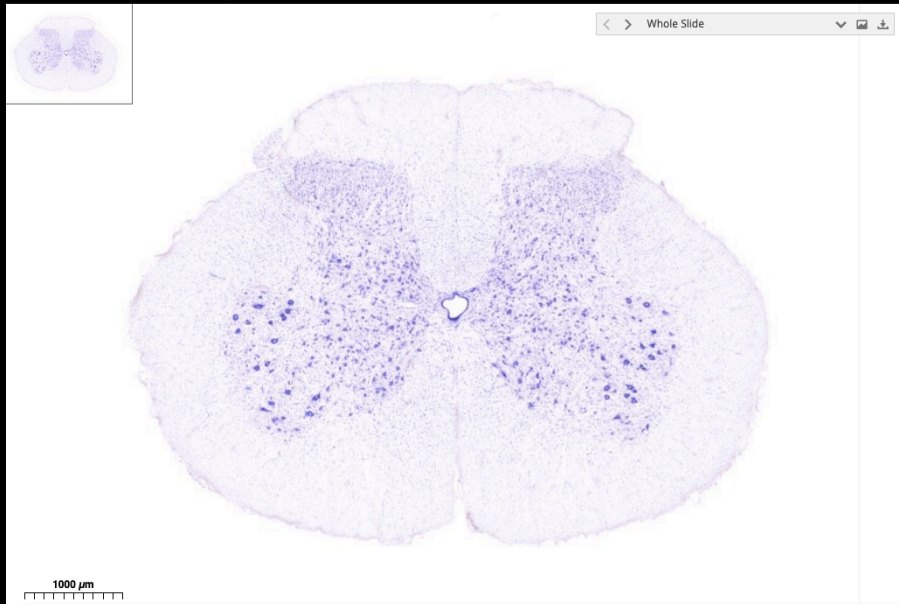


- Sistema Nervoso Central (encéfalo e medula espinhal)
- Sistema Nervoso Periférico (nervos e gânglios nervosos)

Sistema Nervoso Central

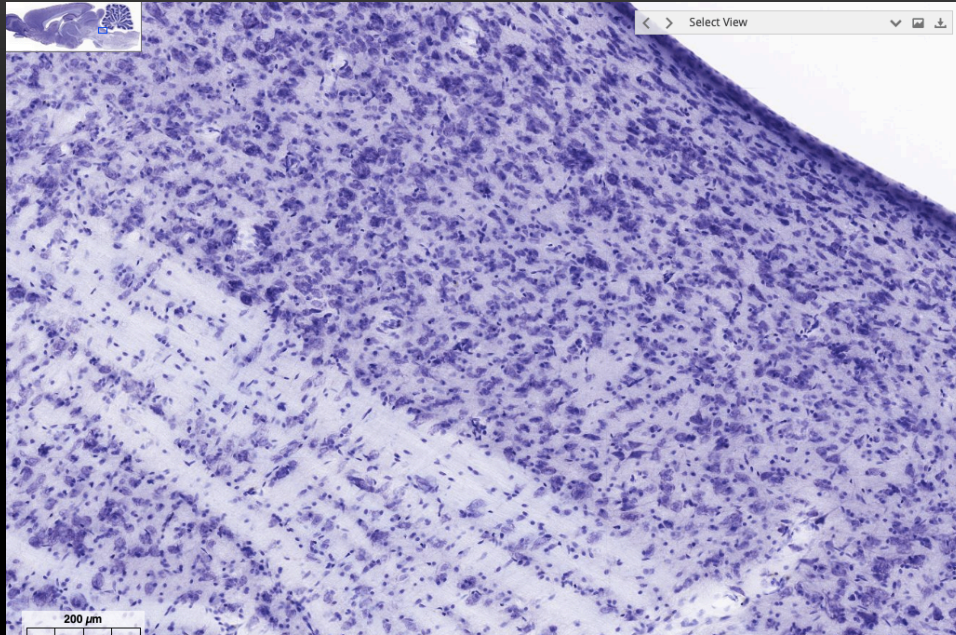


Encéfalo

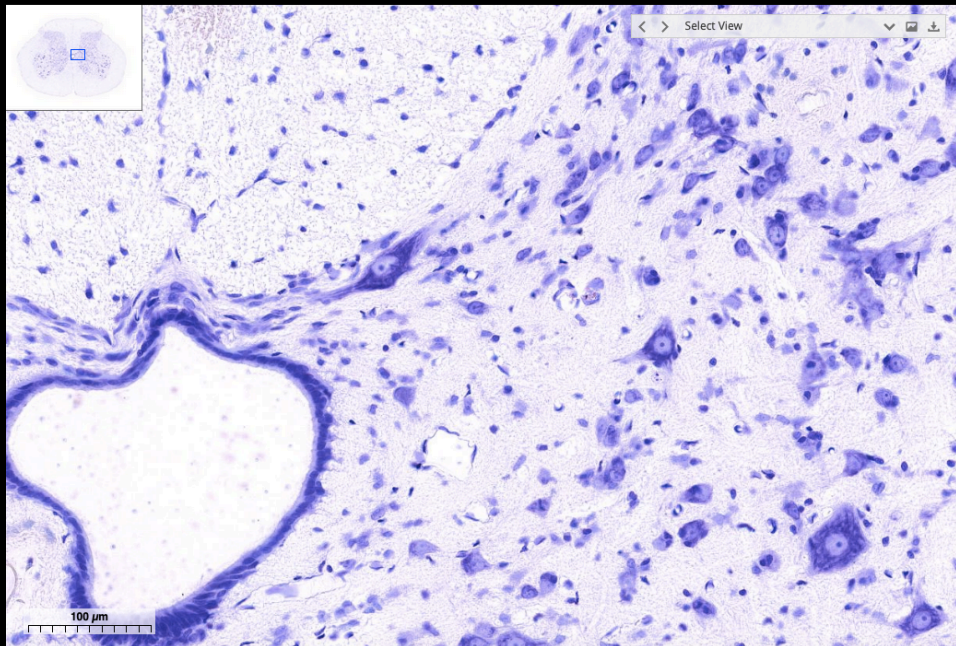


Medula espinhal

SNC



Encéfalo



Medula espinhal

Células componentes do sistema nervoso

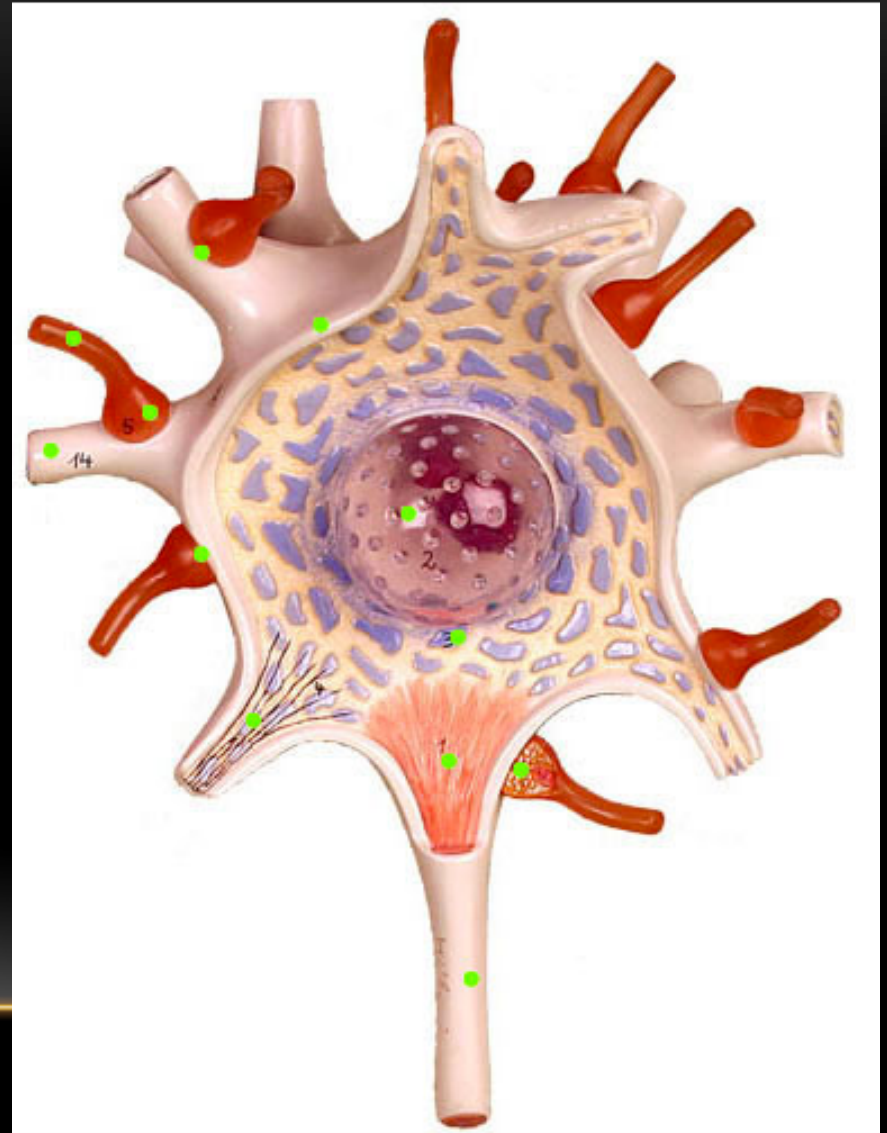
✓ **Neurônios**

✓ **Células da glia/Neuroglia**

NEURÔNIOS

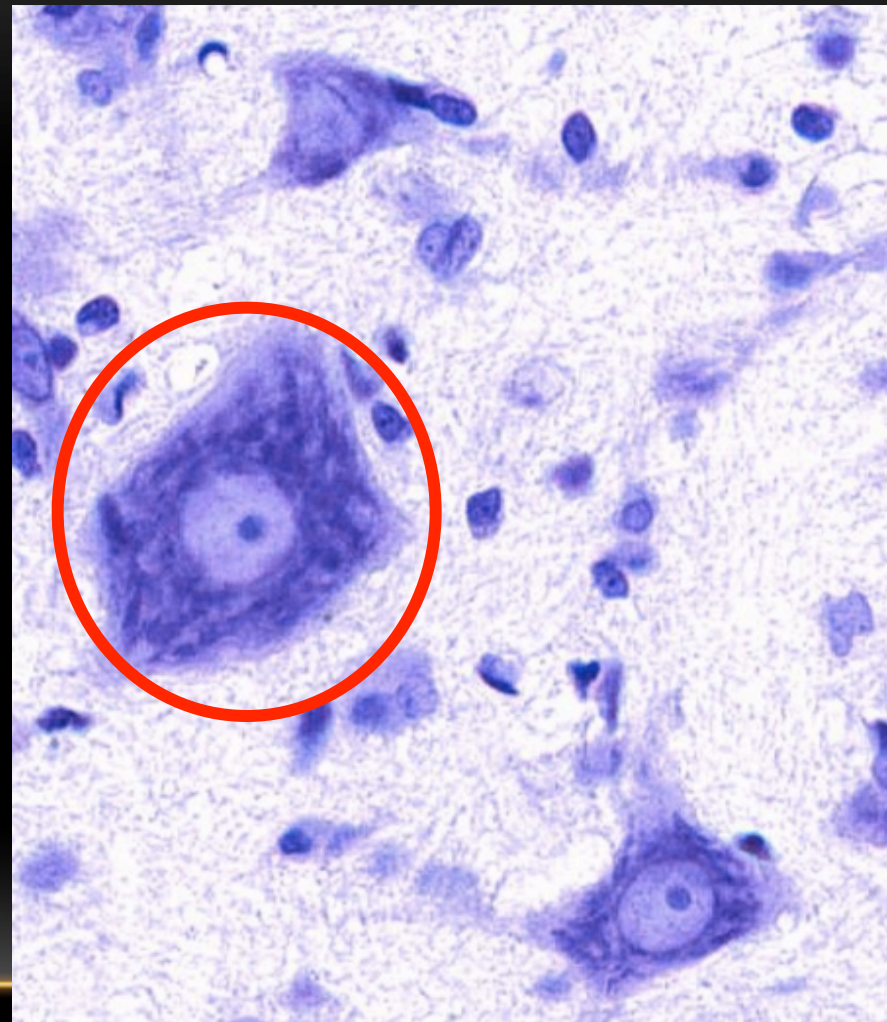
- **Corpo celular / pericário:** centro trófico
 - **Dendritos:** prolongamentos numerosos
 - **Axônio:** prolongamento único
-

NEURÔNIOS:
CORPO CELULAR / PERICÁRIO



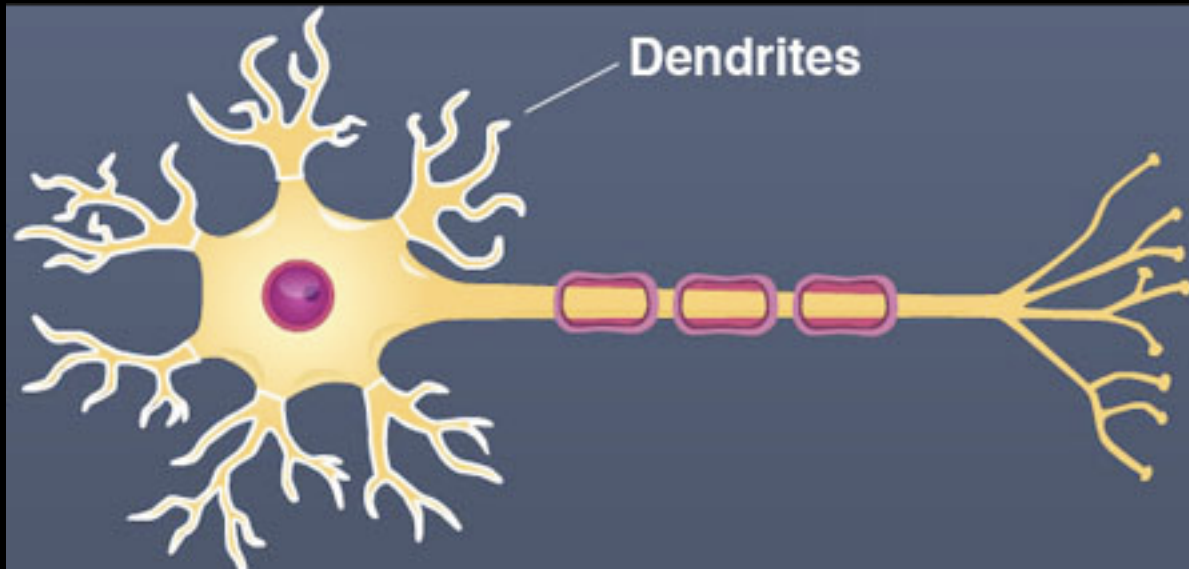
NEURÔNIOS:

CORPO CELULAR / PERICÁRIO

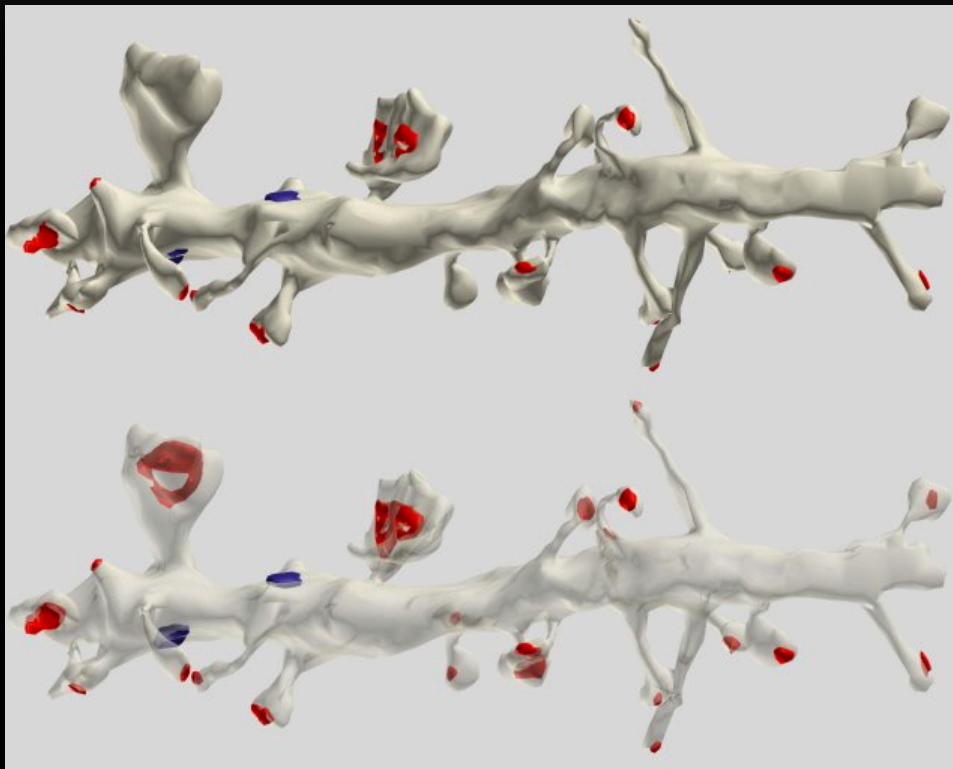


NEURÔNIOS: DENDRITOS

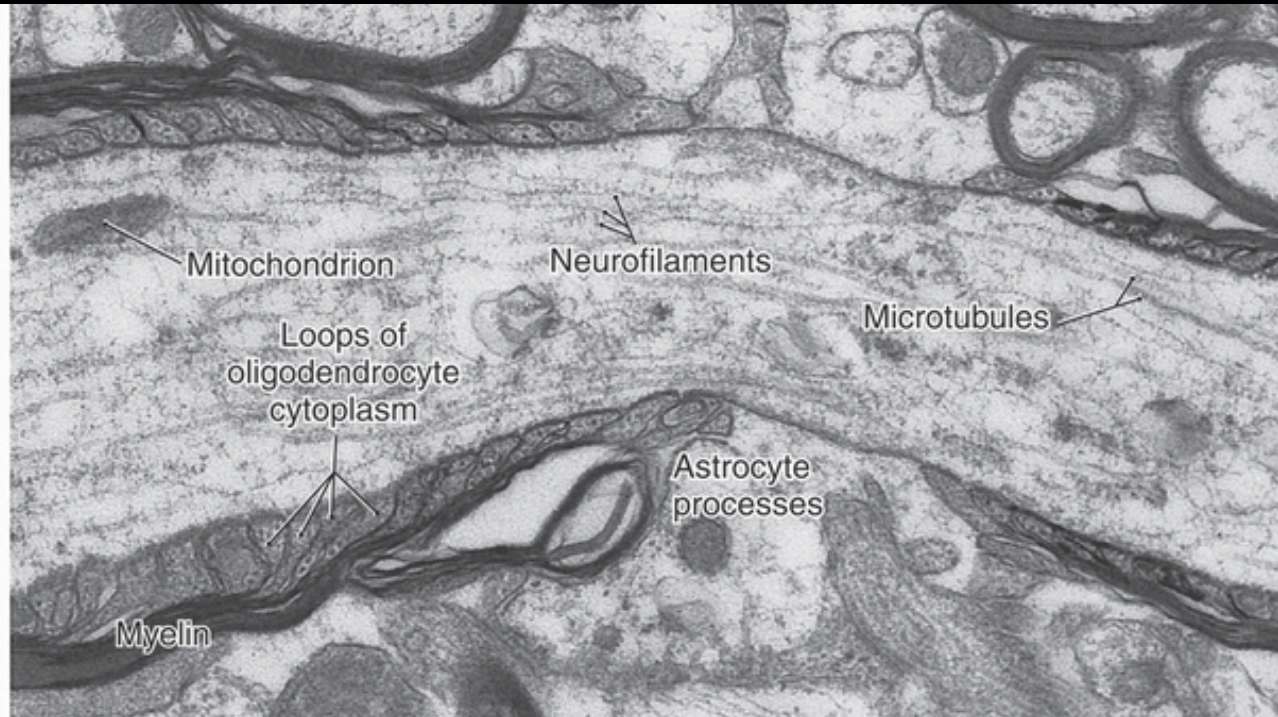
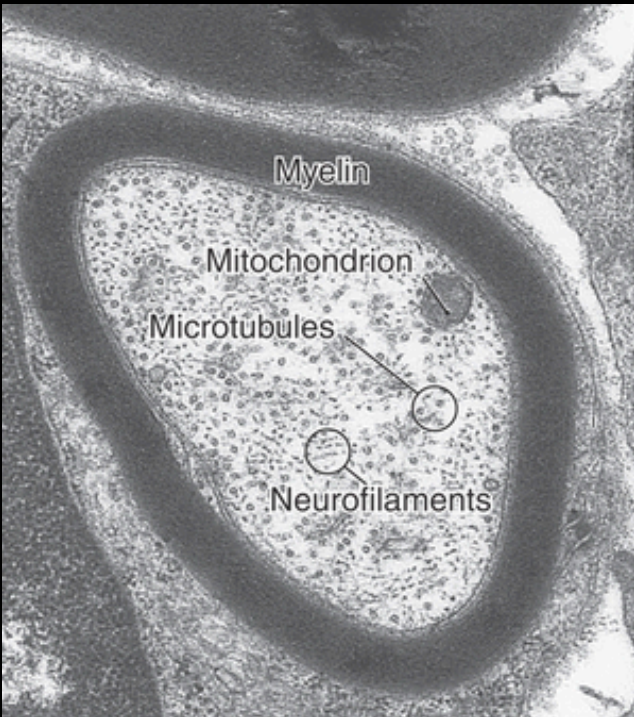
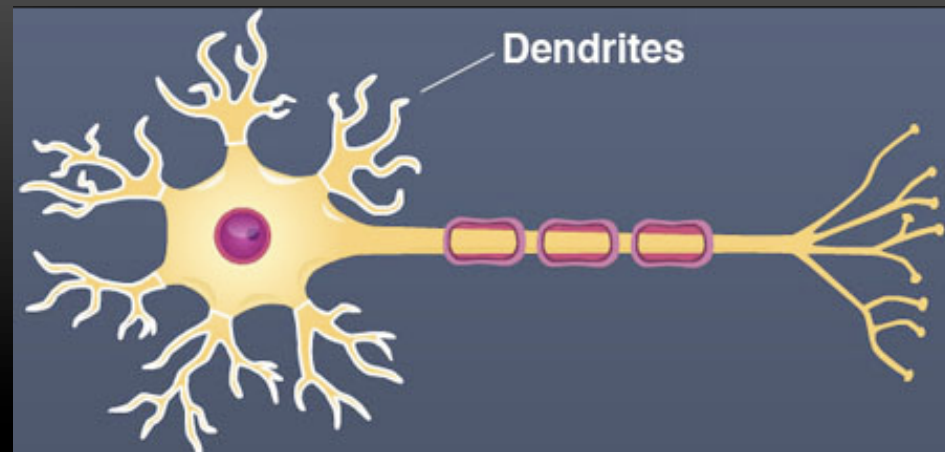
- aumentam a superfície celular
- espinhos/gêmulas: projeções citoplasmáticas: **locais de sinapse**

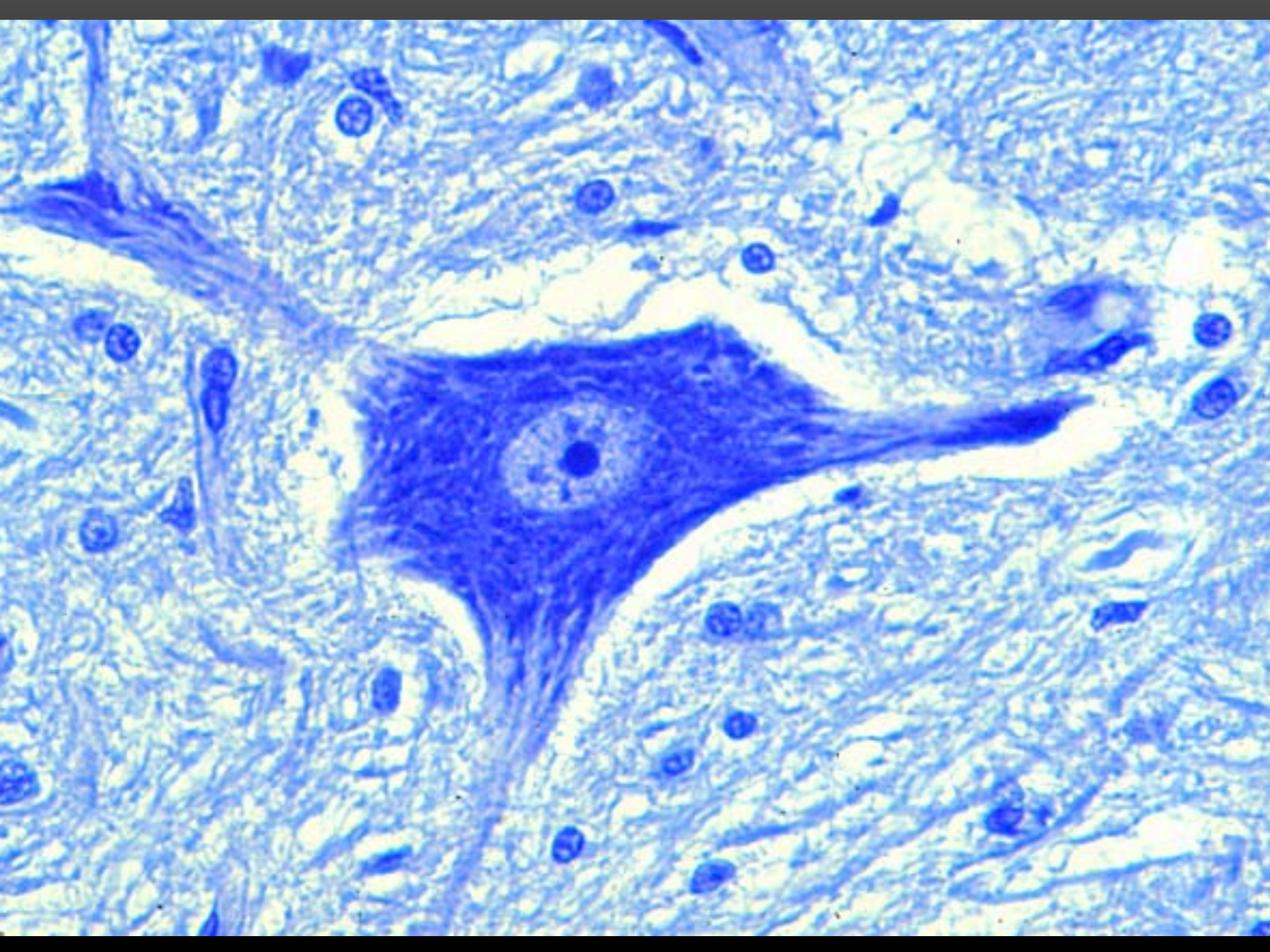


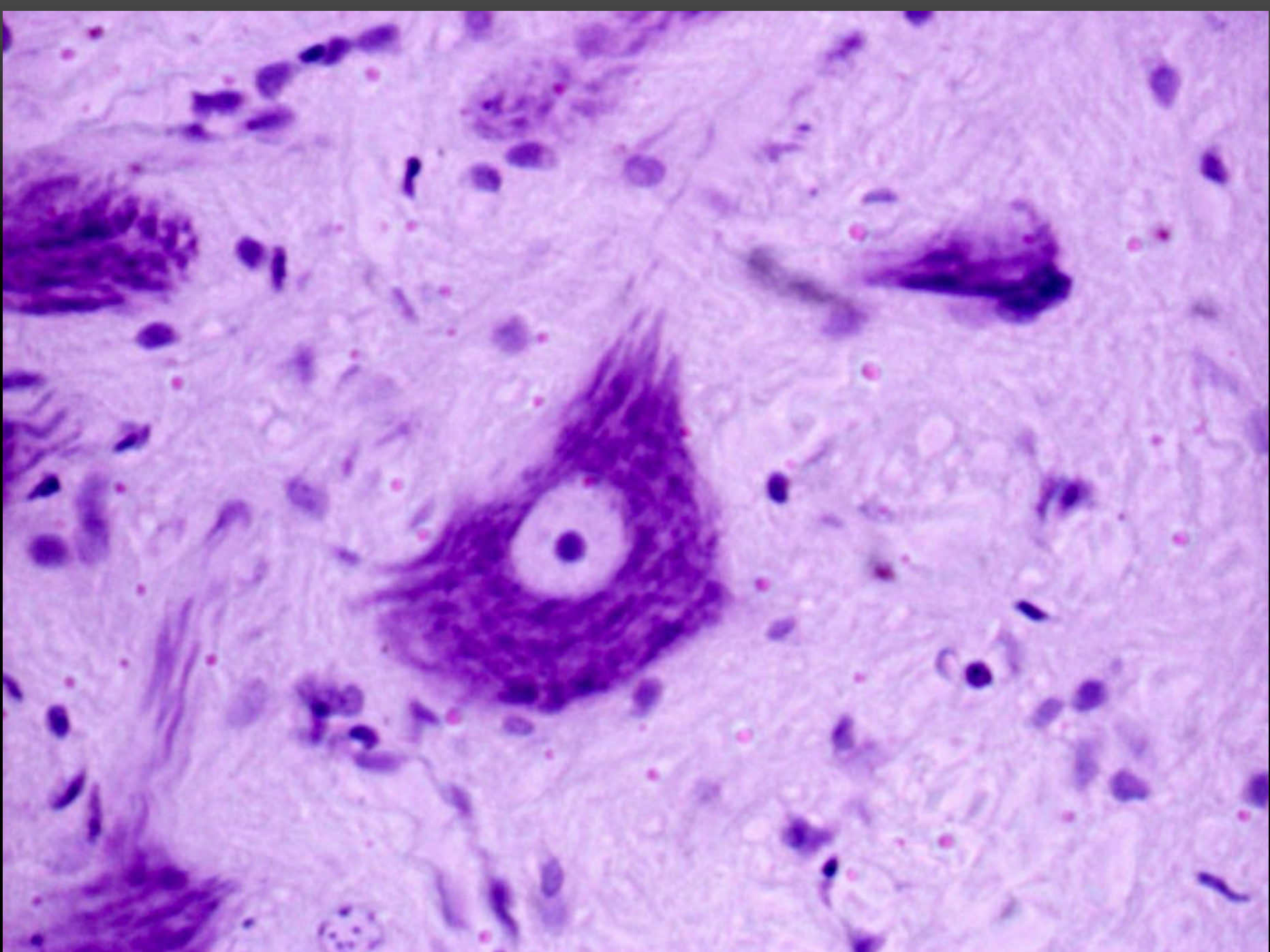
NEURÔNIOS: DENDRITOS

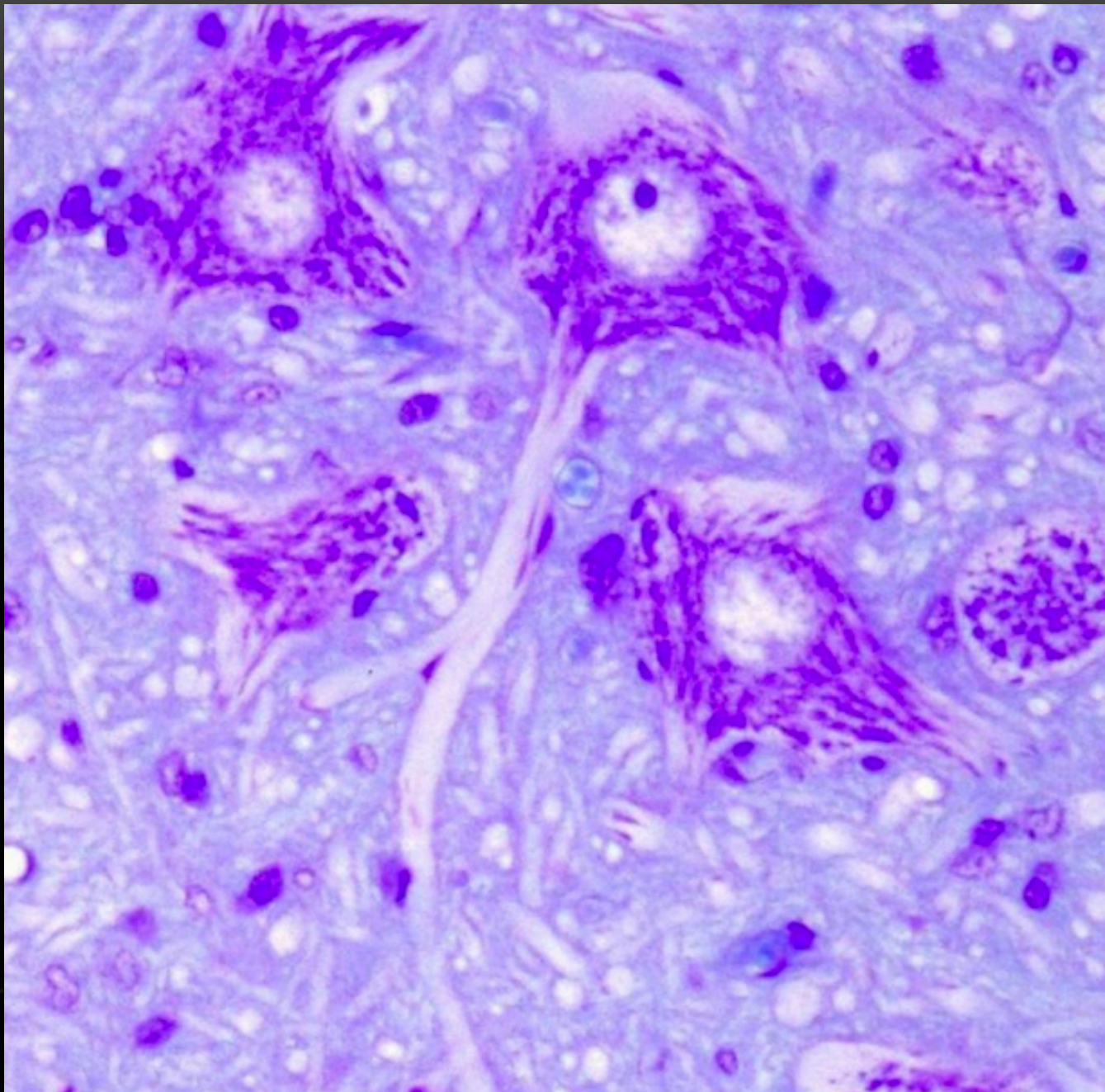


NEURÔNIOS: AXÔNIOS









CÉLULAS DA GLIA

10 células da glia
para cada neurônio

- ❖ não geram impulsos nervosos
- ❖ não formam sinapses
- controle da composição química do meio neuronal
- multiplicação mitótica

CÉLULAS DA GLIA

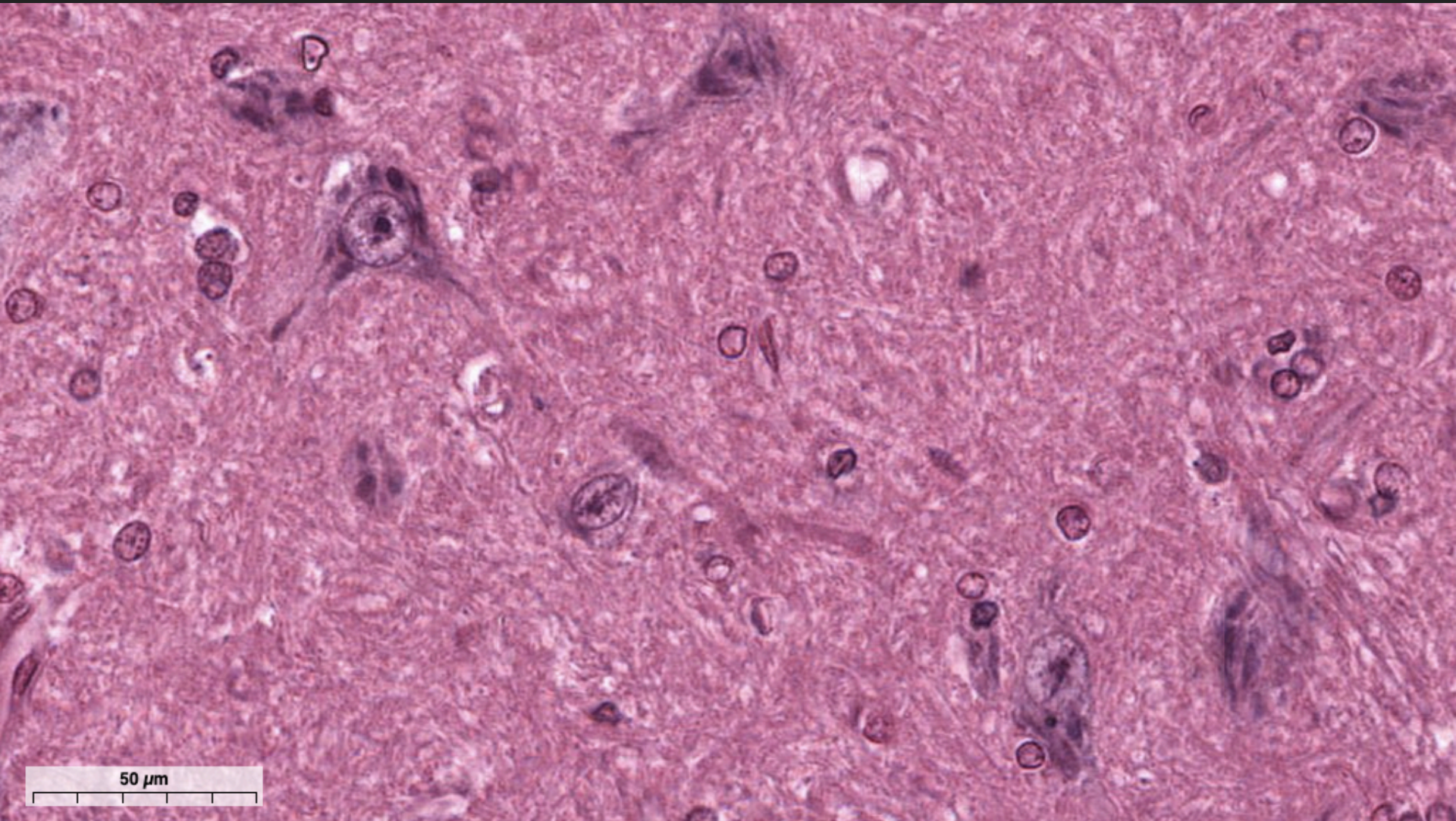
❖ ASTRÓCITOS

❖ OLIGODENDRÓCITOS

❖ MICRÓGLIA

❖ CÉLULAS EPENDIMÁRIAS

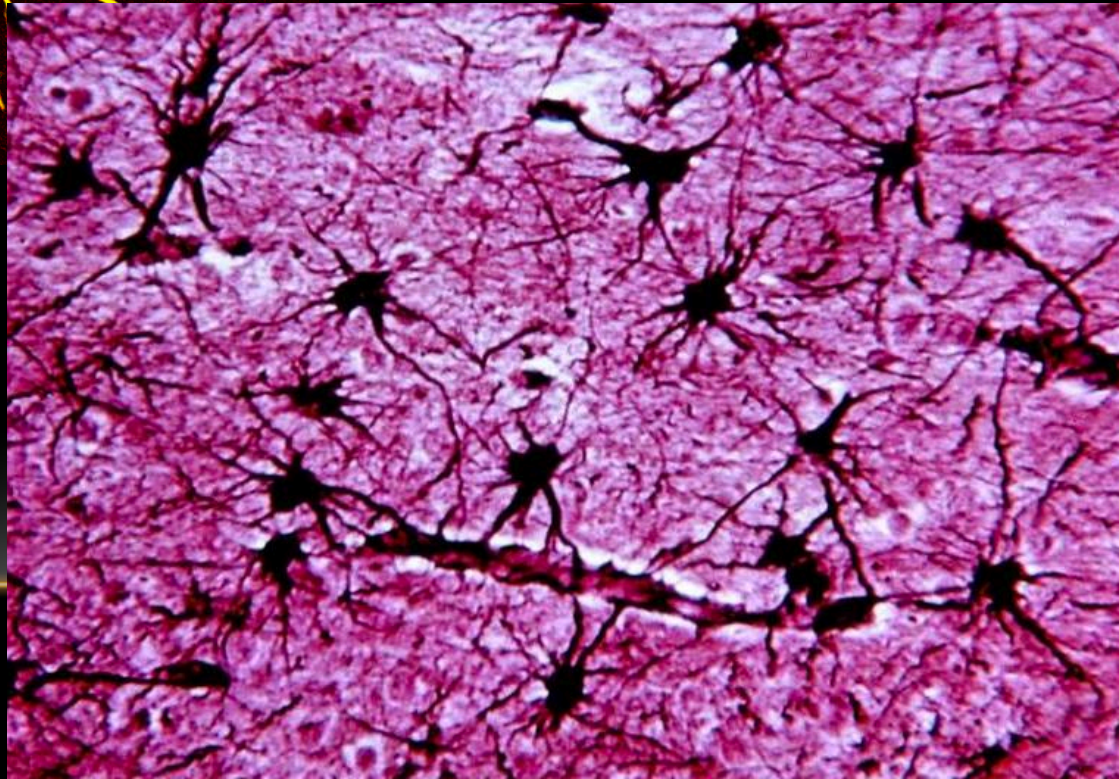
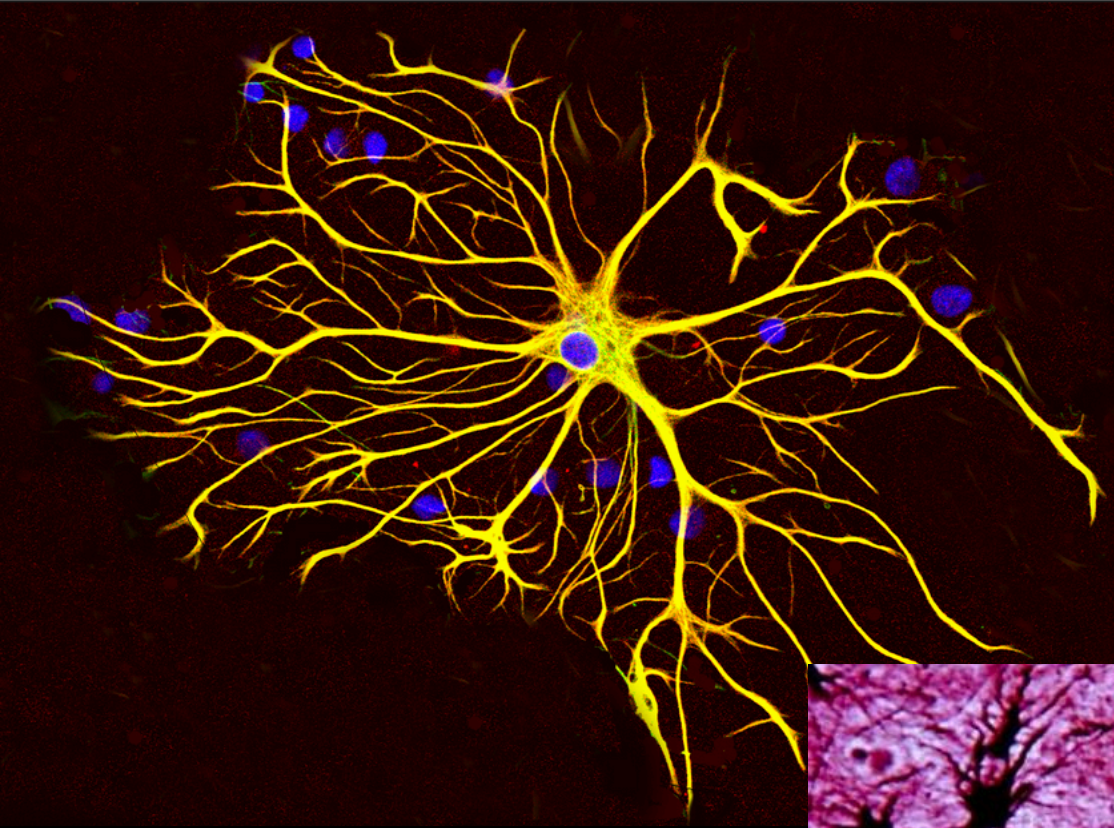
CÉLULAS DA GLIA

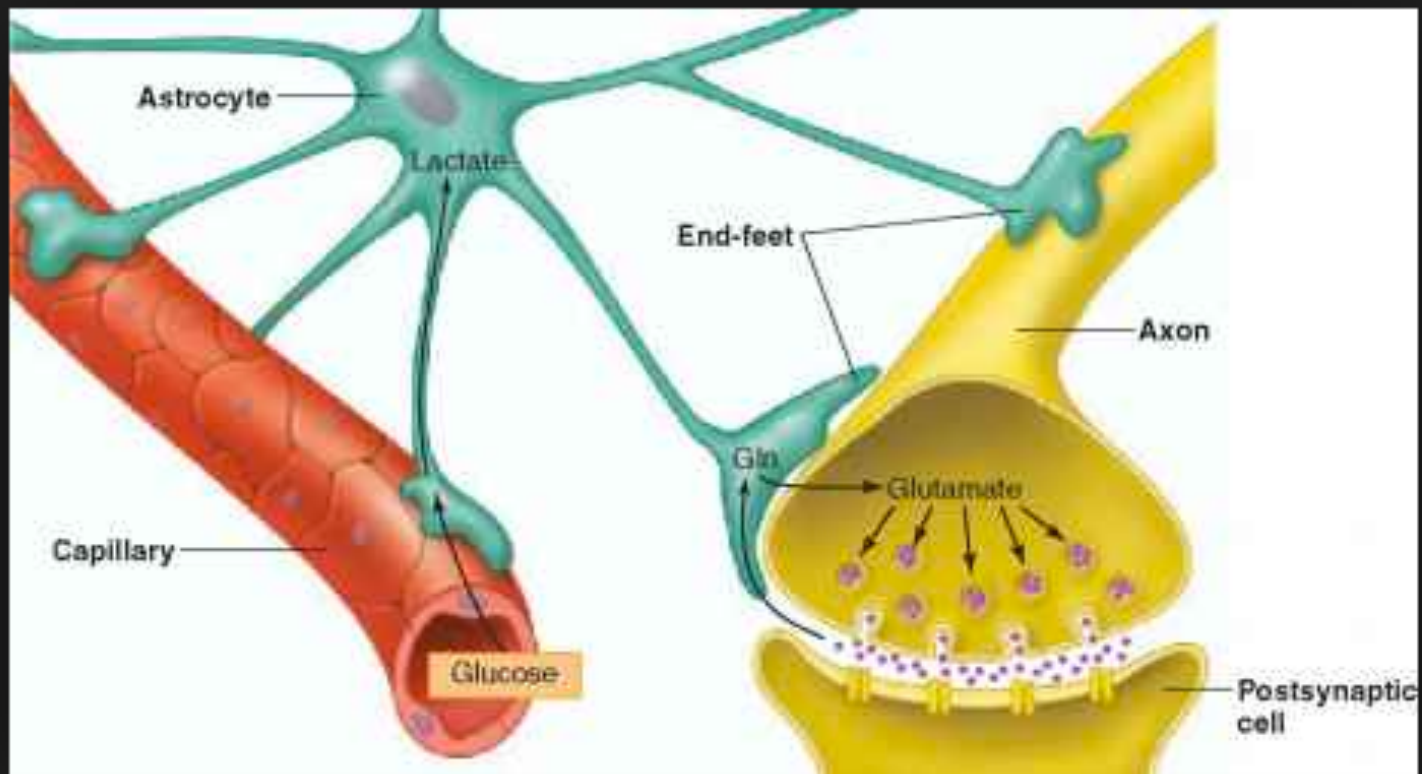


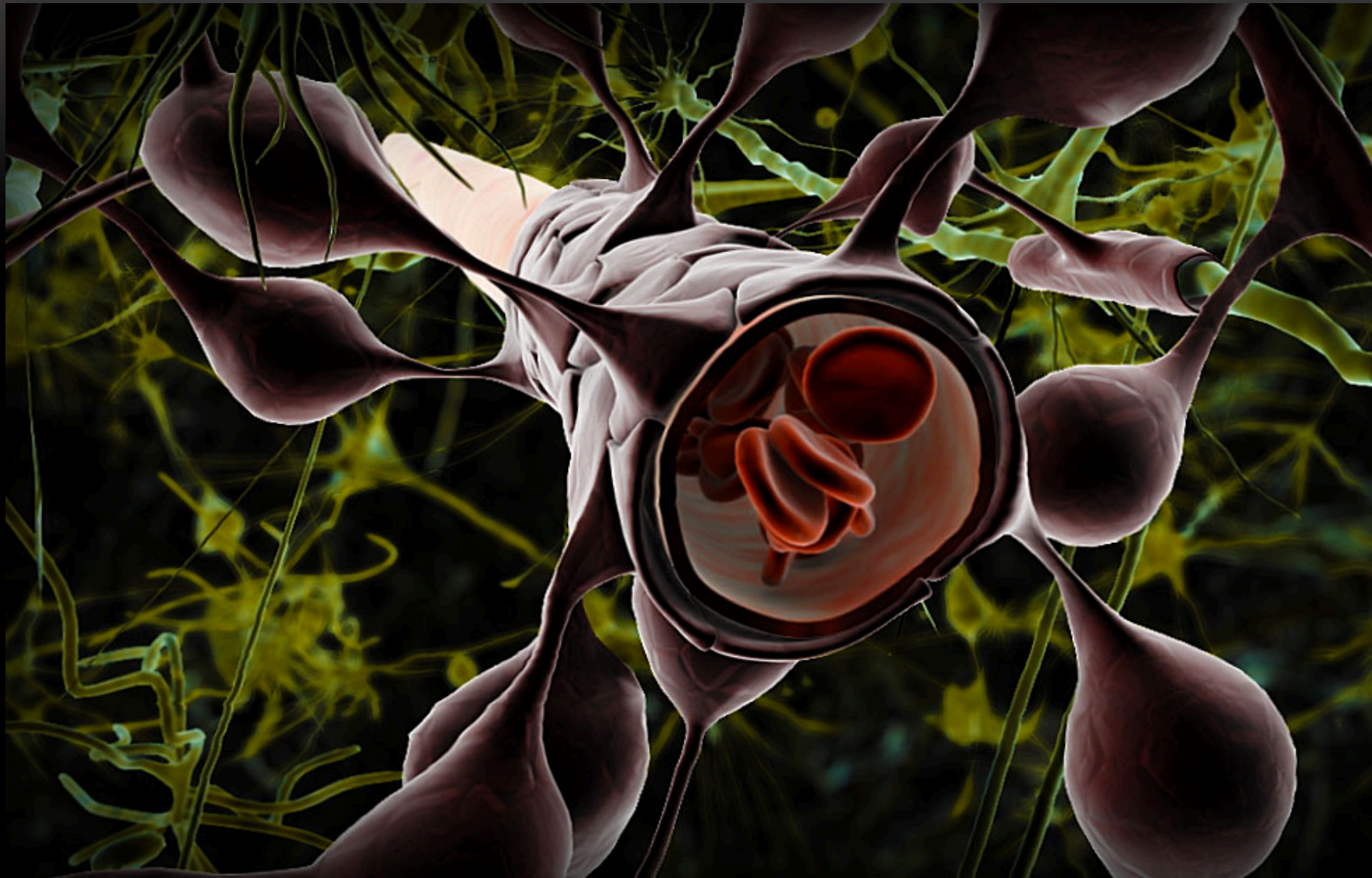
CÉLULAS DA GLIA

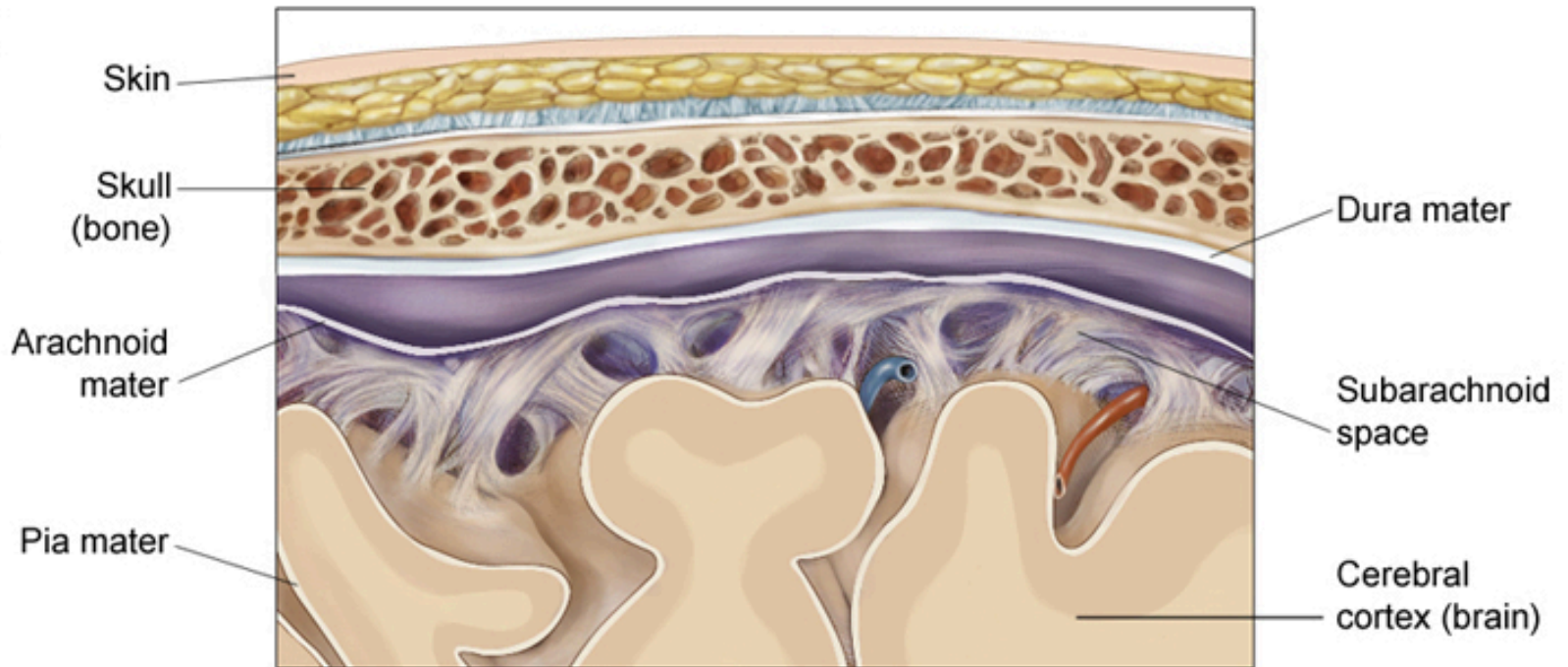
Astrócitos

- ✓ maiores células da glia
- ✓ núcleos esféricos e centrais
- suporte físico e metabólico ao neurônio
- resposta à injúrias (fagocitose e gliose)
- Pés vasculares (barreira hematoencefálica)









Cross-section of skull and the Meninges

CÉLULAS DA GLIA

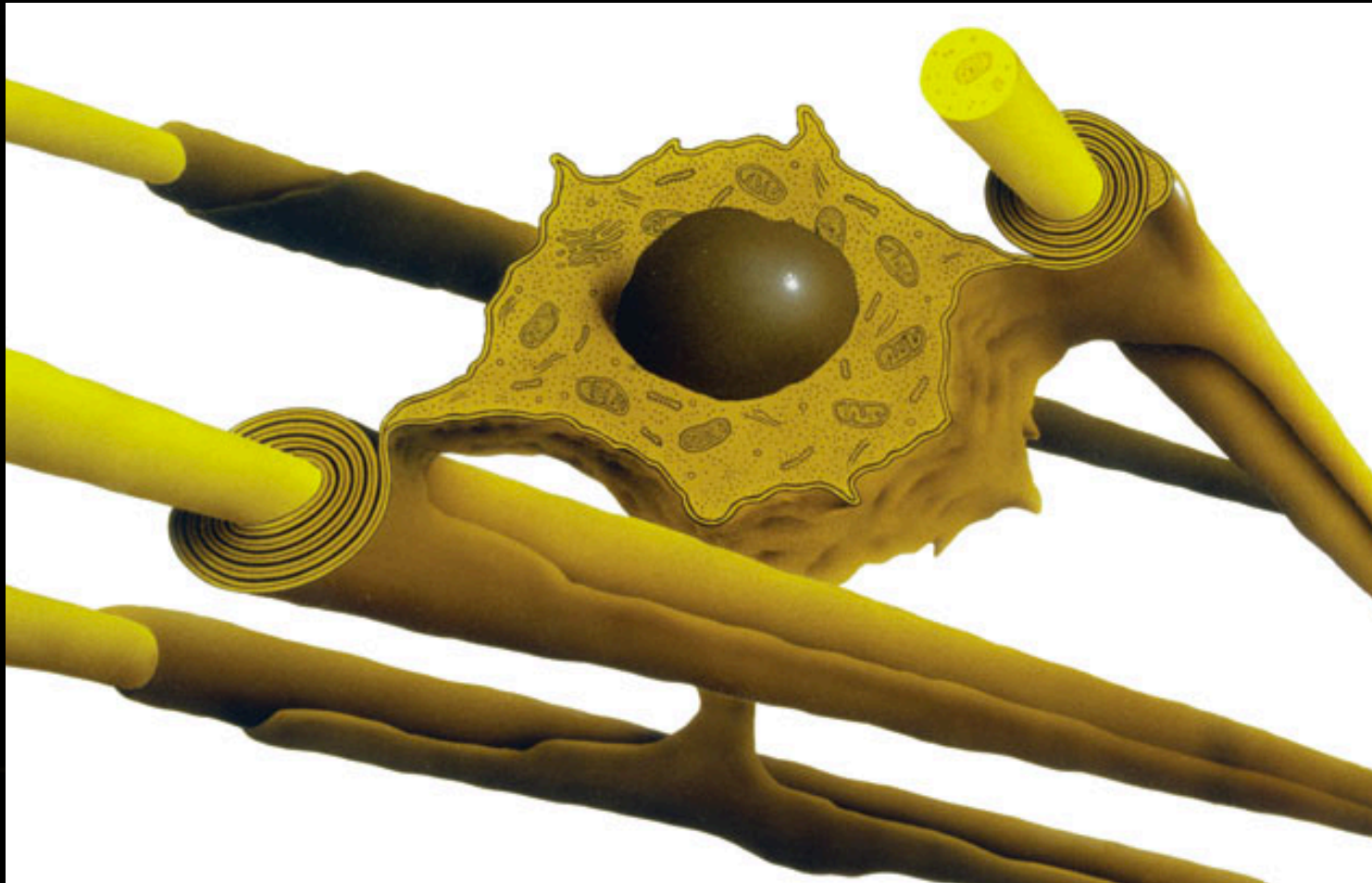
Oligodendrócitos

- ❖ células menores
- ❖ poucos e curtos prolongamentos
- ❖ **substância cinzenta**
 - células satélites
- ❖ **substância branca**
 - dispostos entre as fibras nervosas mielínicas (oligodendrócitos interfasciculares)

Formação de mielina
do SNC

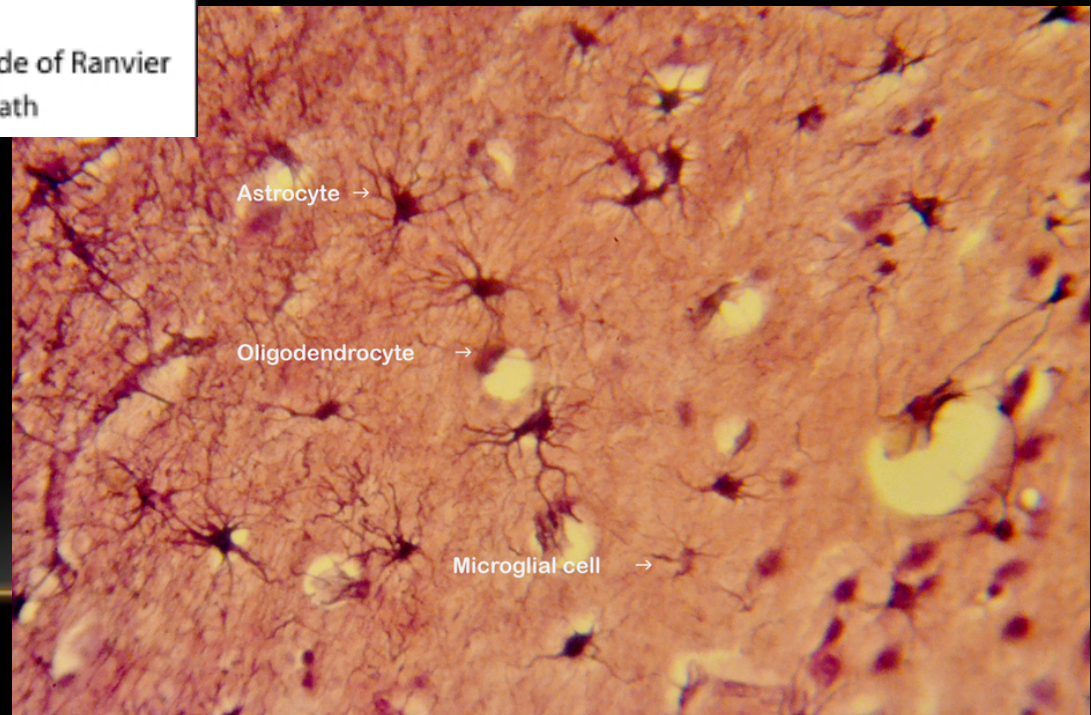
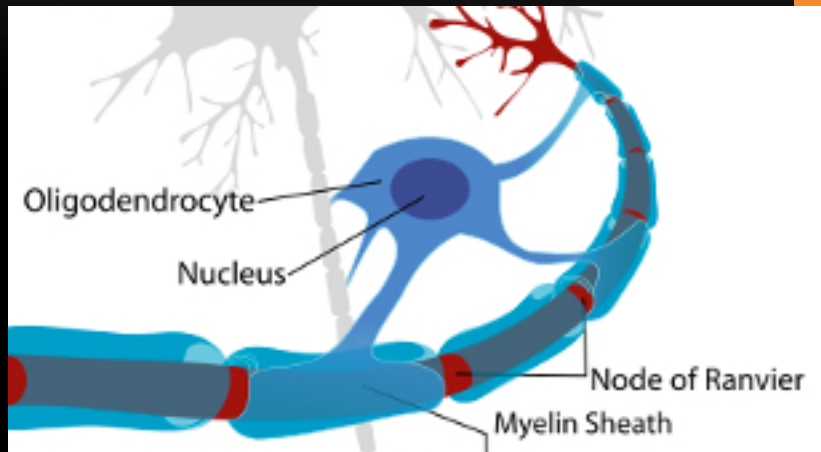
CÉLULAS DA GLIA

Oligodendrócitos



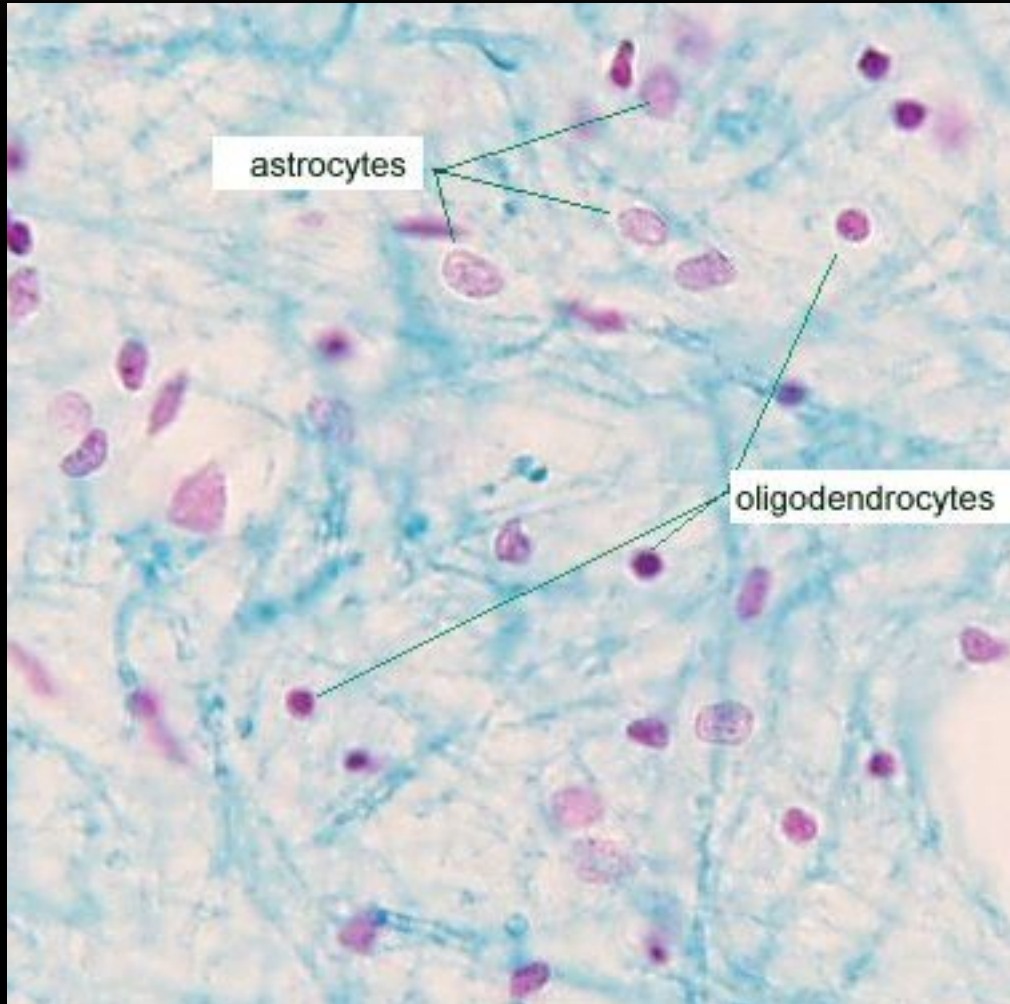
CÉLULAS DA GLIA

Oligodendrócitos



CÉLULAS DA GLIA

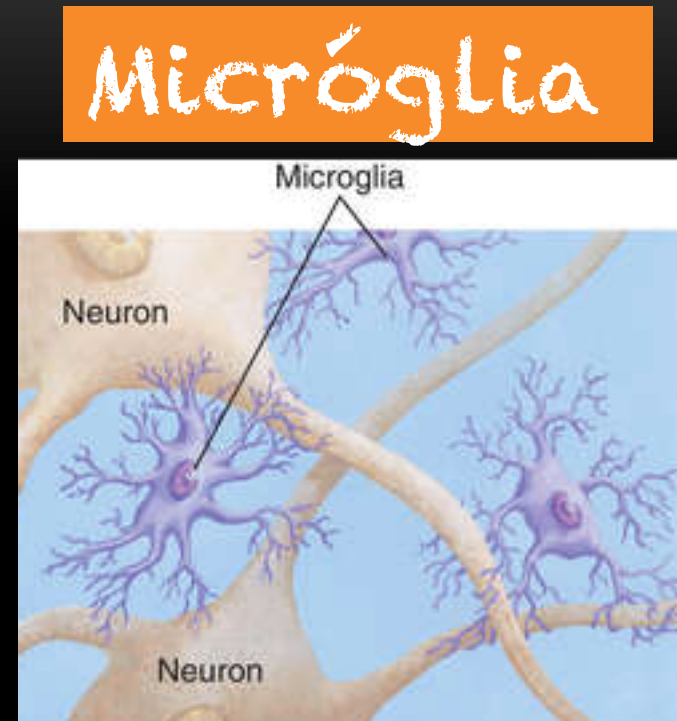
Oligodendrócitos



CÉLULAS DA GLIA

- ❖ corpo alongado e pequeno
- ❖ pouco numerosas
- ❖ prolongamento curto com saliências finas (aspecto espinhoso)
- ❖ local: substância branca e cinzenta

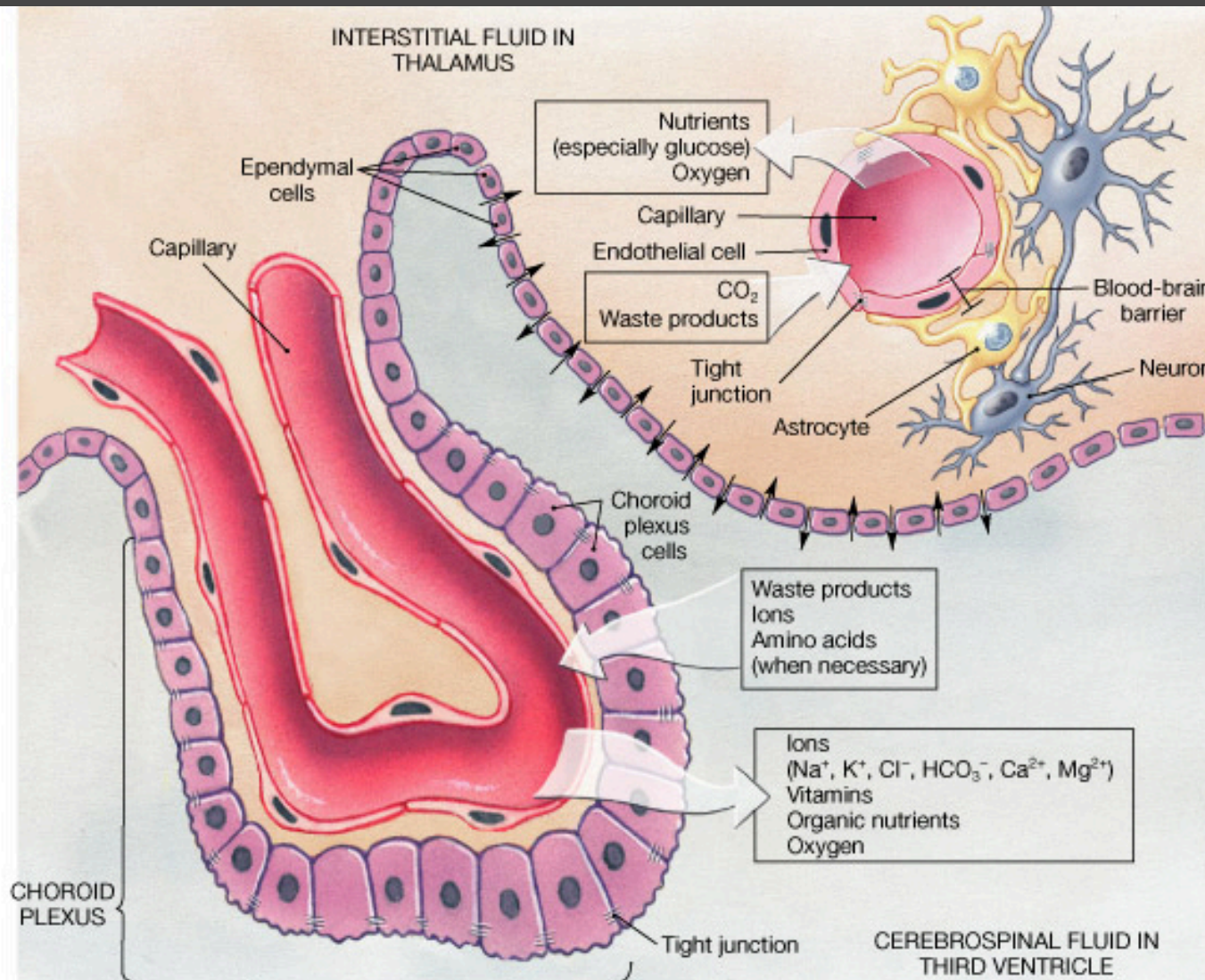
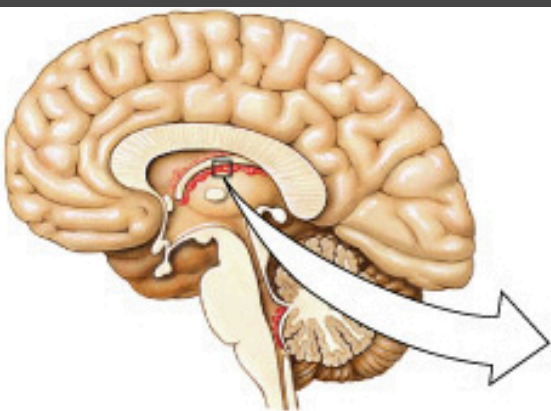
*macrofágicas (parte do sistema mononuclear fagocitário)



CÉLULAS DA GLIA

Microglia



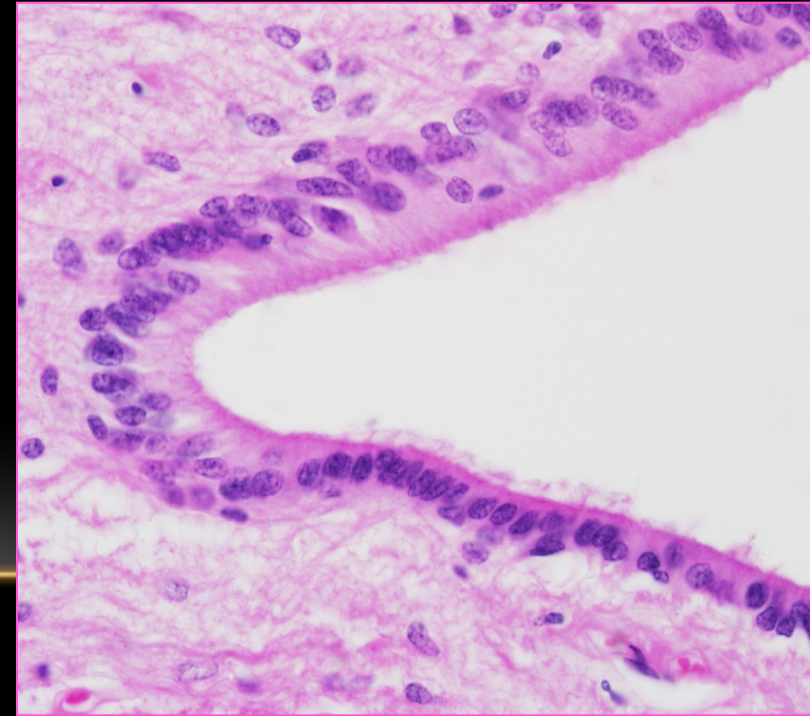
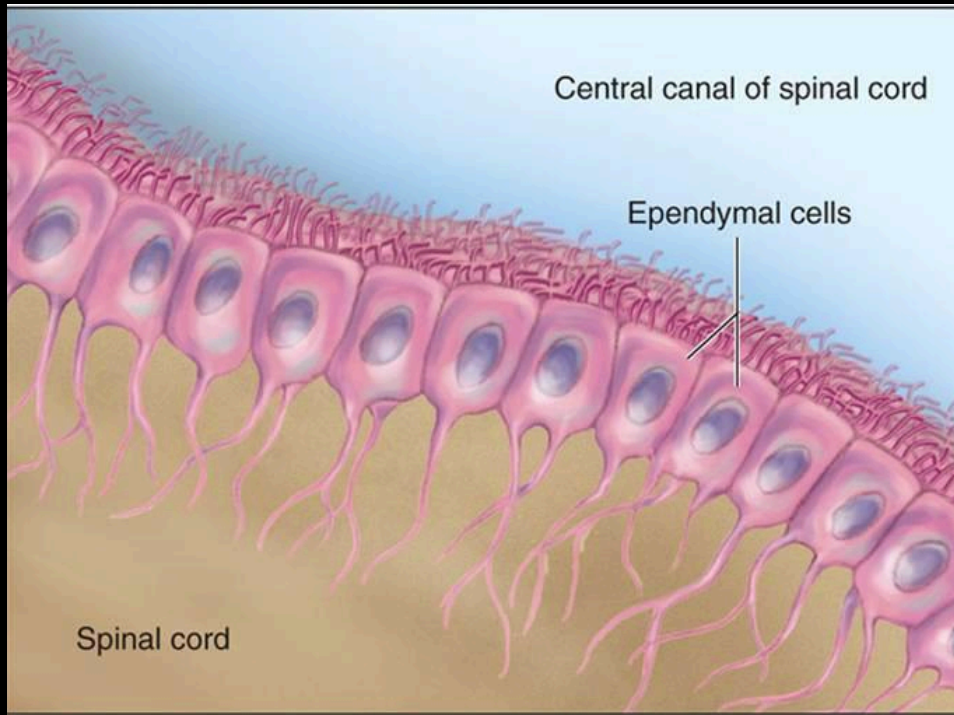


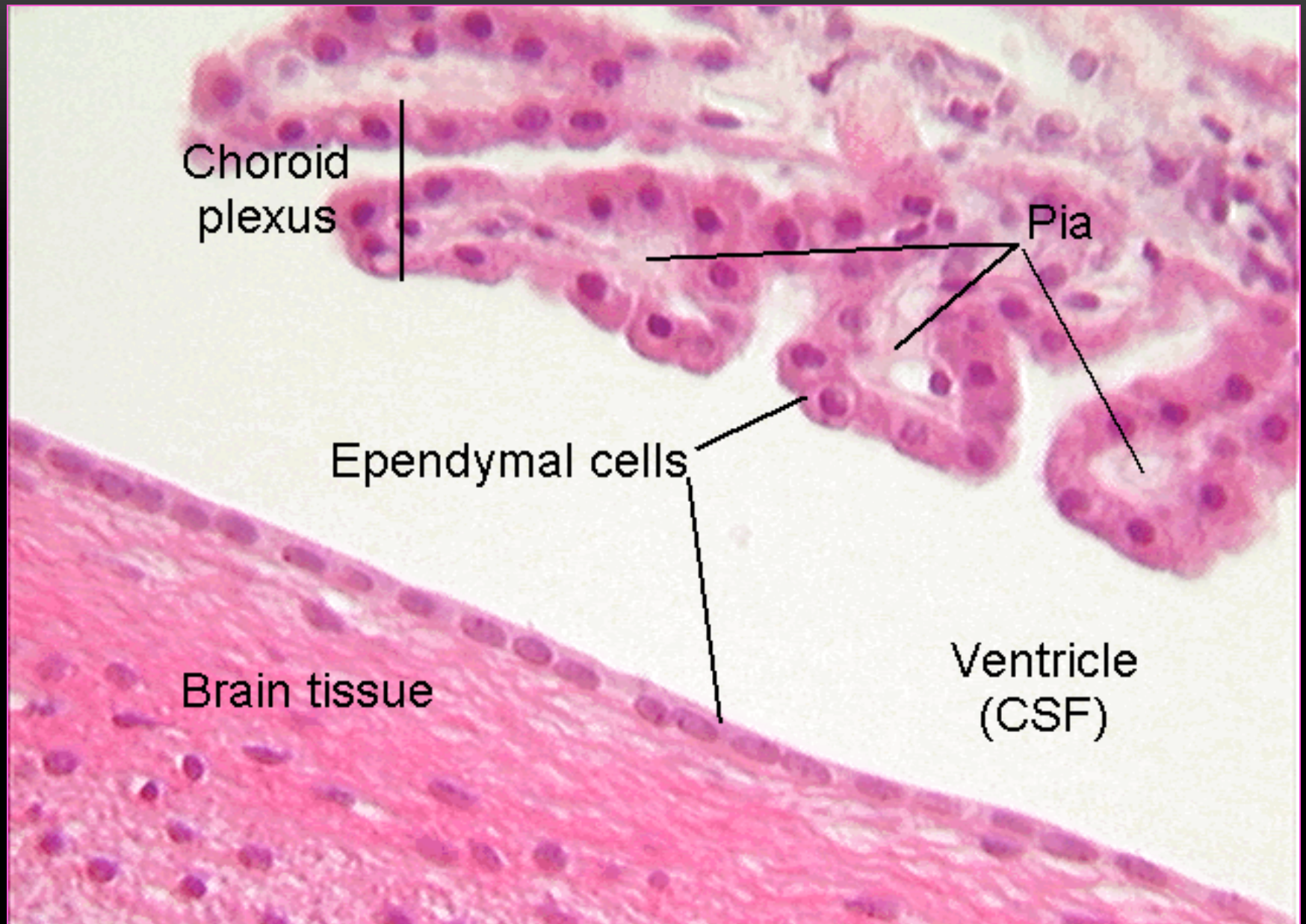
Formação do líquido cefalorraquidiano

CÉLULAS DA GLIA

Células Ependimárias

- ❖ arranjo epitelial
- ❖ revestimento das cavidades do encéfalo e da medula
- ❖ contato com o líquido cefalorraquidiano





SISTEMA NERVOSO PERIFÉRICO

✓ -agrupamento das **fibras nervosas**: nervos

❖ **Amielínicas**: axônios envolvidos por uma única dobra da célula envoltória

❖ **Mielínicas**: axônios envoltos por uma dobra enrolada em espiral

CONDUÇÃO DO IMPULSO NERVOSO MAIS RÁPIDO

* **AXÔNIOS DE MAIOR DIÂMETRO**

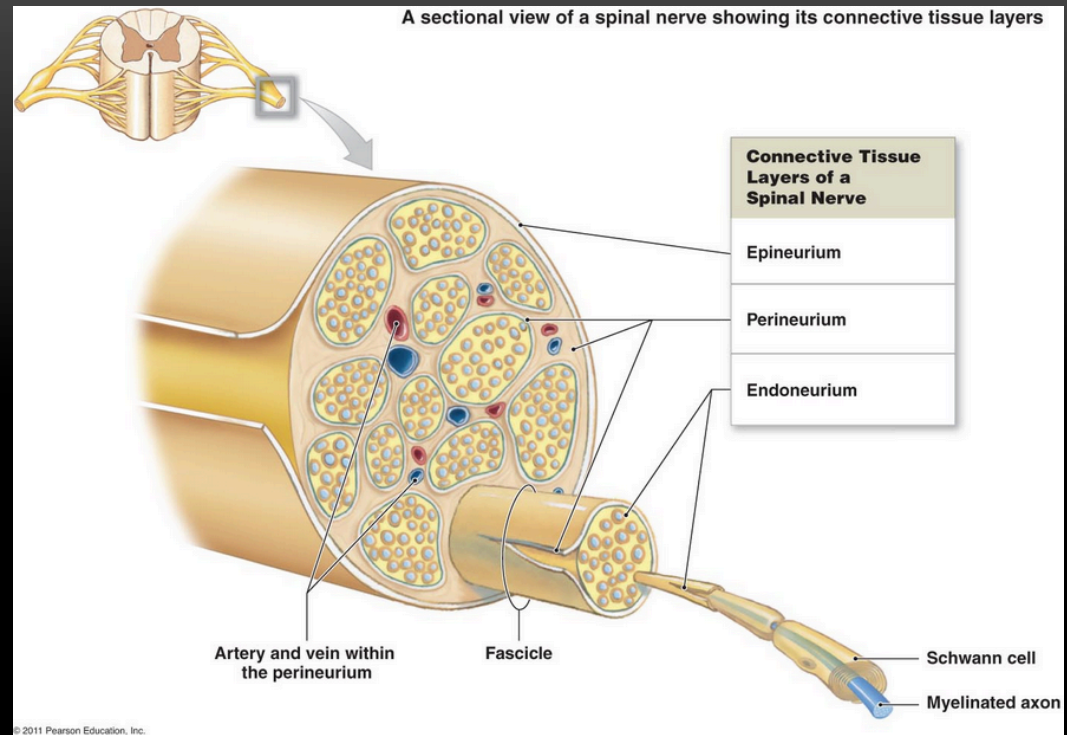
* **BAINHA DE MIELINA MAIS ESPESSA**

✓ -Gânglios nervosos: conjunto de corpos de neurônios fora do SNC

FIBRAS NERVOSAS

CONSTITUIÇÃO

- ❖ axônio
- ❖ bainhas envoltórias



Fibras nervosas periféricas → Células de Schwann

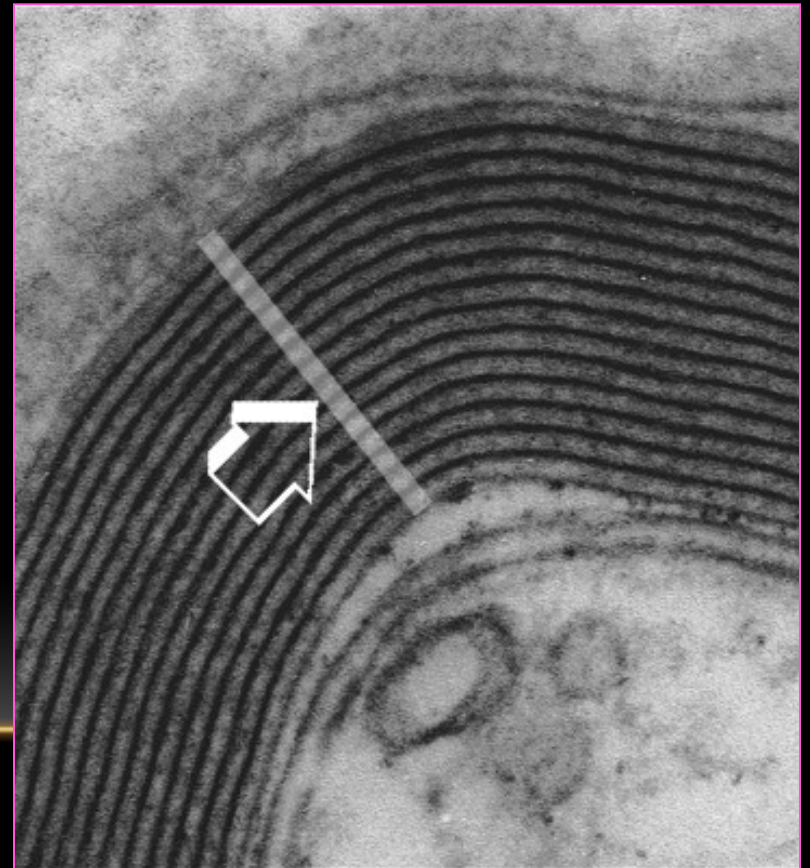
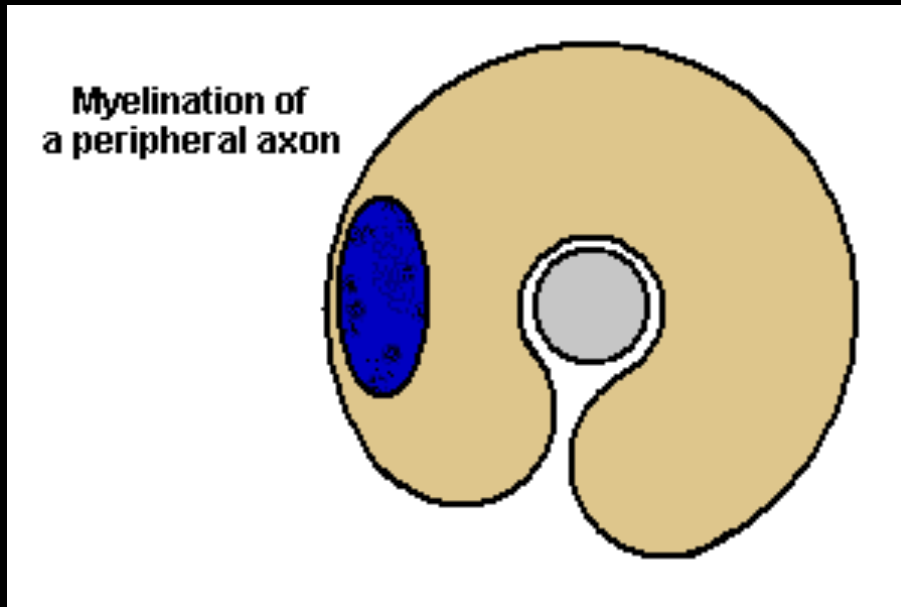
✓ SNC → Oligodendrócitos

FIBRAS NERVOSAS

FORMAÇÃO DA MIELINA

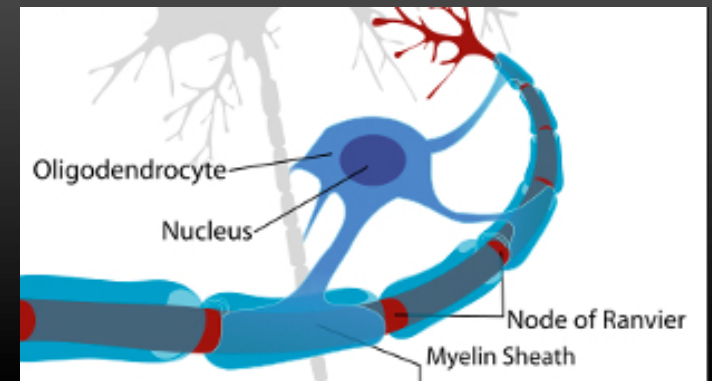
❖ complexo lipoprotéico

➤ constituída por várias camadas de membranas celulares modificadas

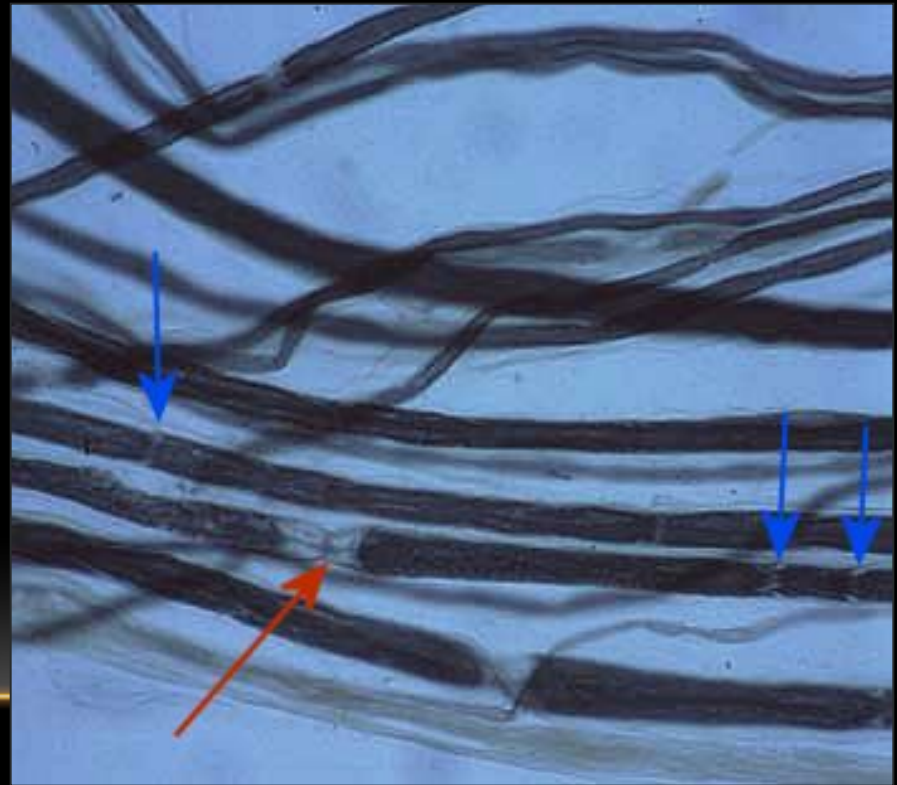
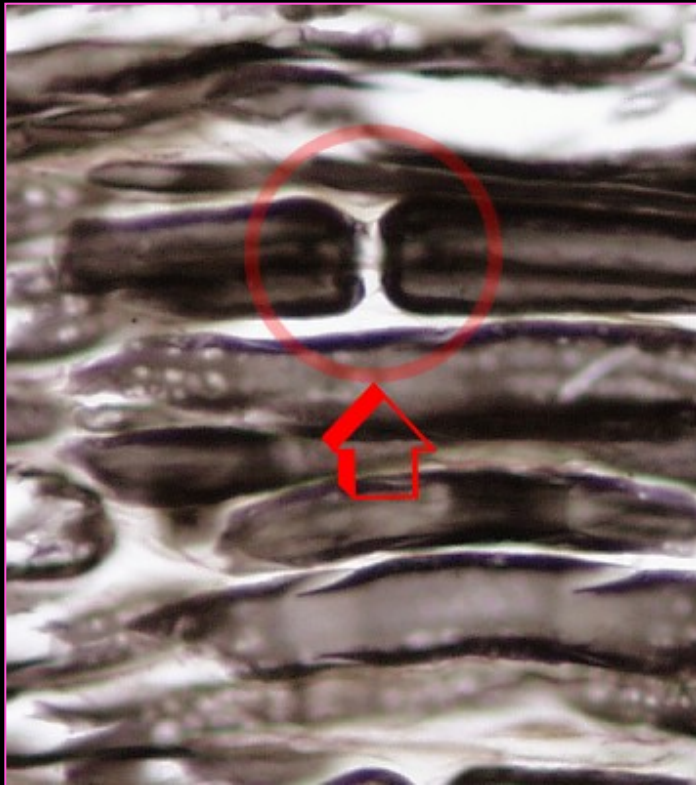


FIBRAS NERVOSAS

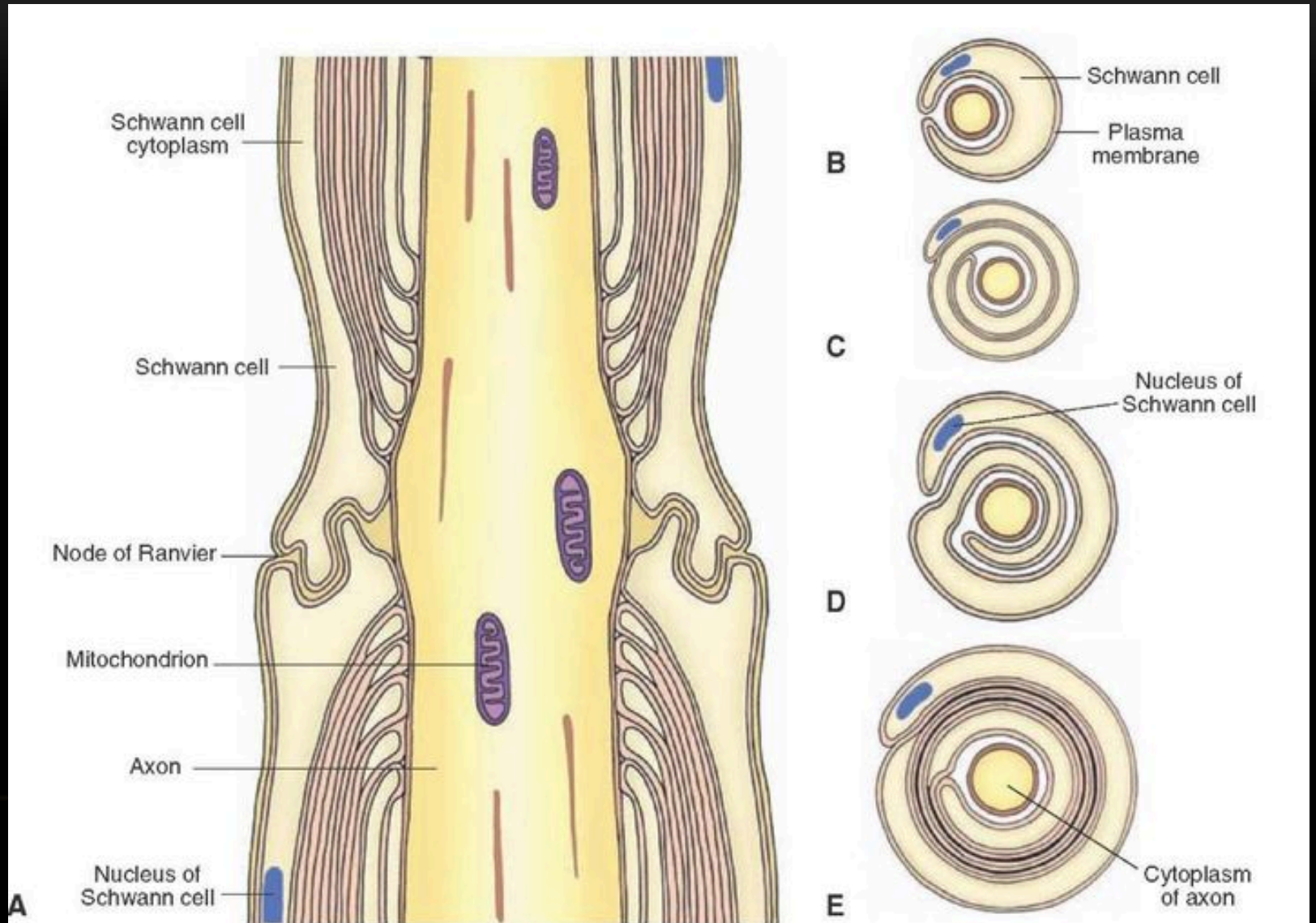
FORMAÇÃO DA MIELINA



❖ **Nódulos de Ranvier:** locais sem mielina, cobertos com prolongamentos de células de Schwann adjacentes



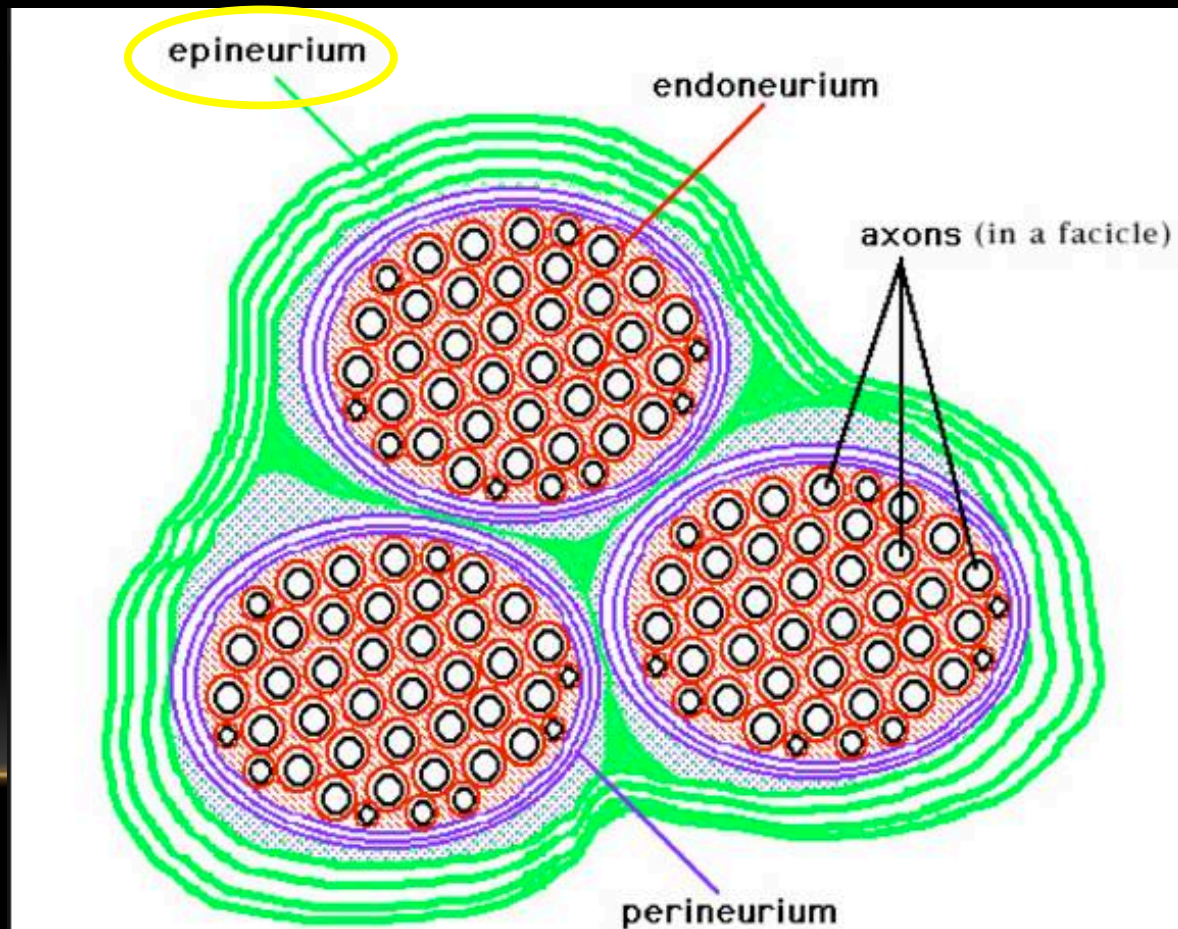
FIBRAS NERVOSAS

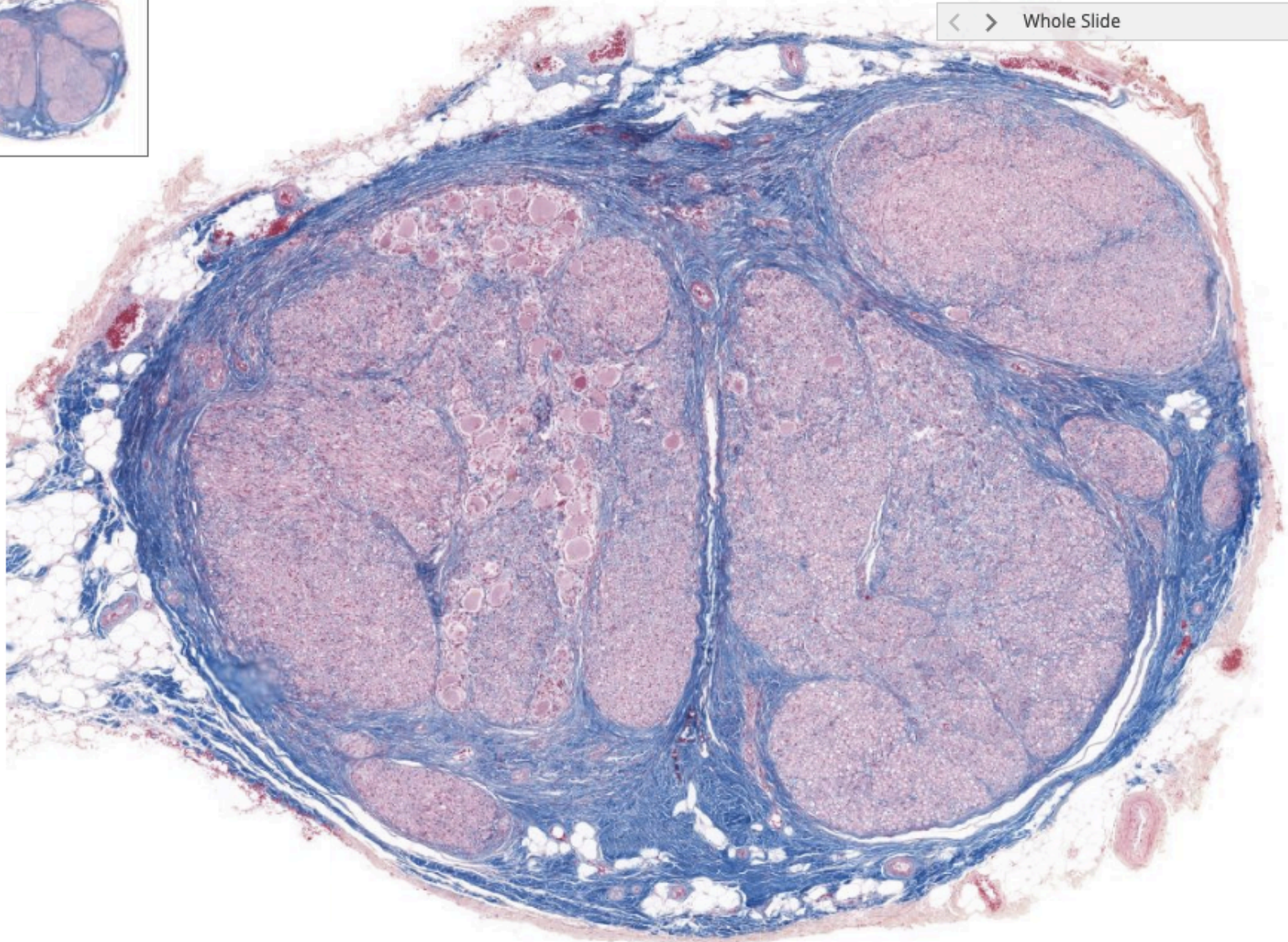
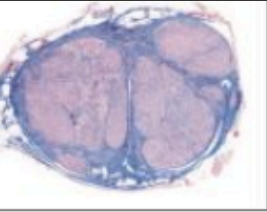


FIBRAS NERVOSAS

Revestimento e união por tecido conjuntivo:

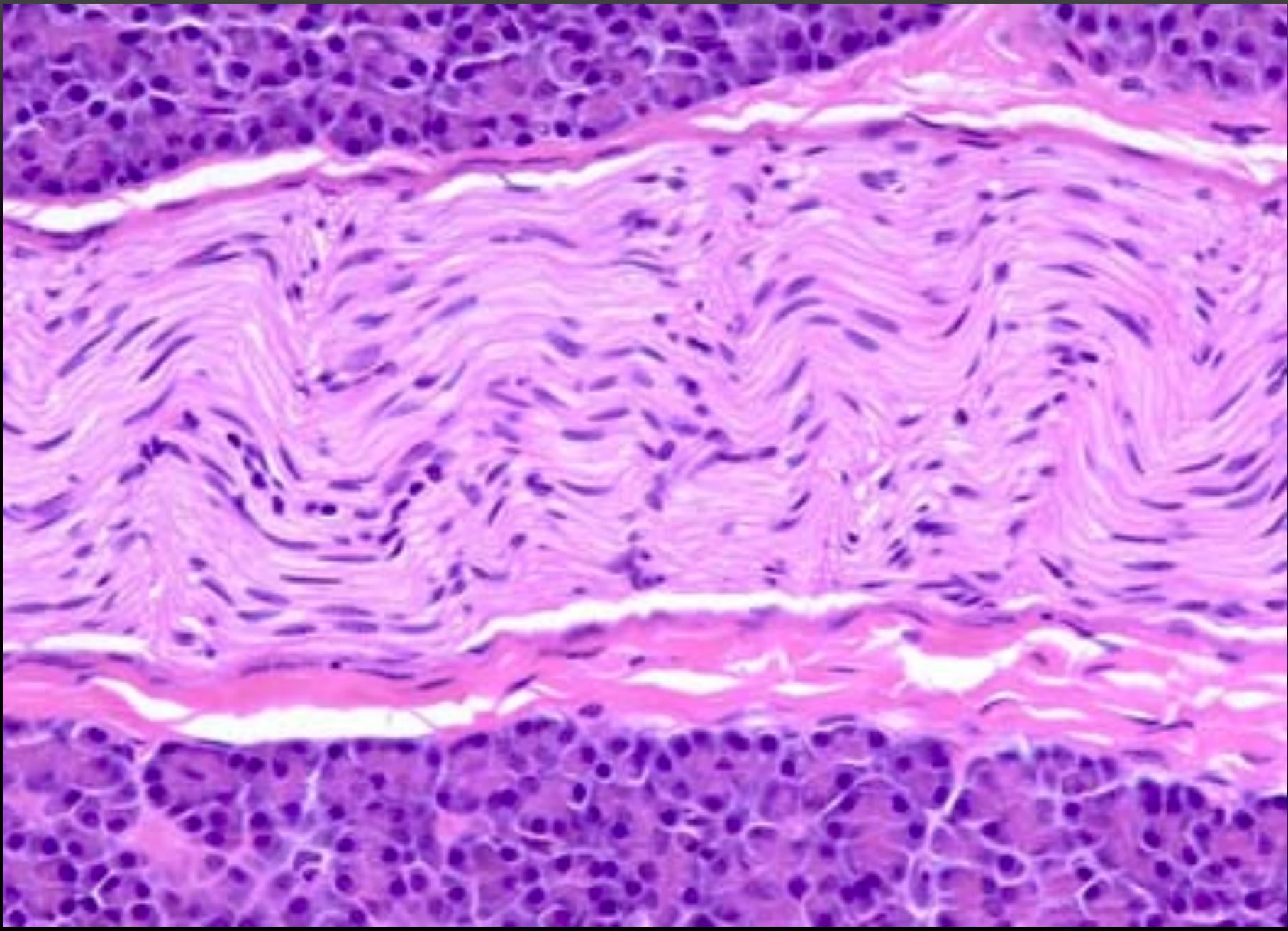
- Epineuro
- Perineuro
- Endoneuro

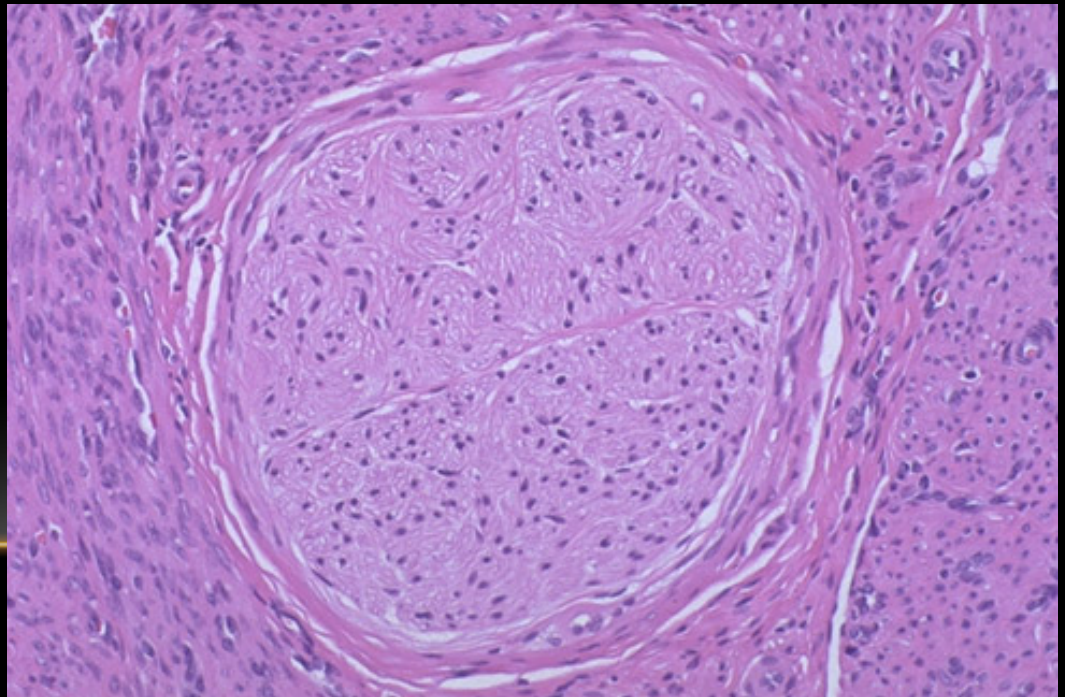
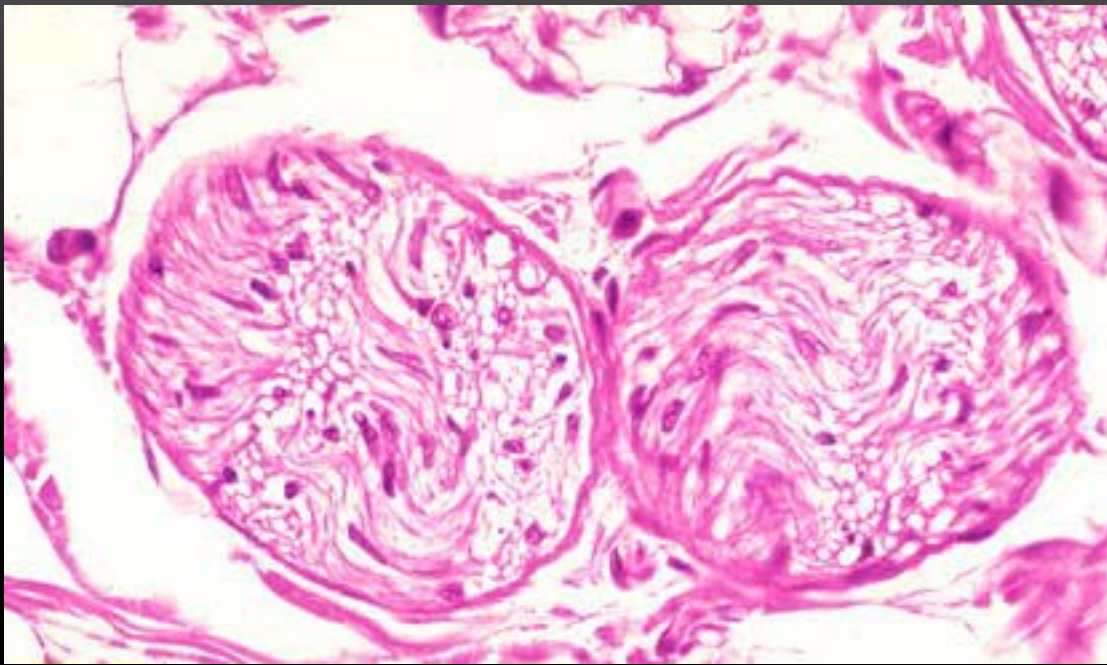




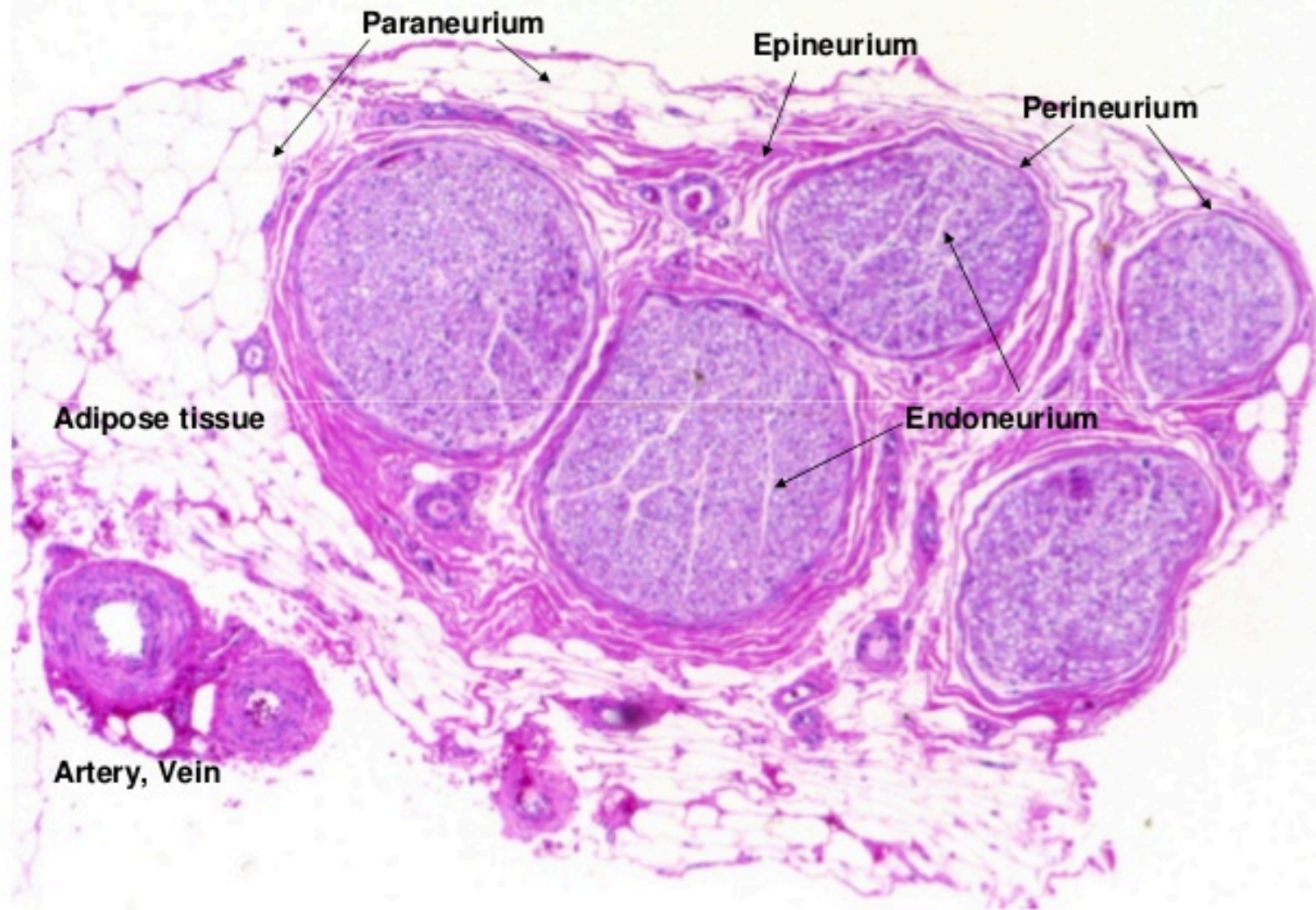
1000 μm

A horizontal scale bar located at the bottom left of the image, consisting of a series of vertical tick marks of varying lengths, used to indicate the magnification level of the tissue section.





PERIPHERAL NERVE IN TRANSVERSE SECTION



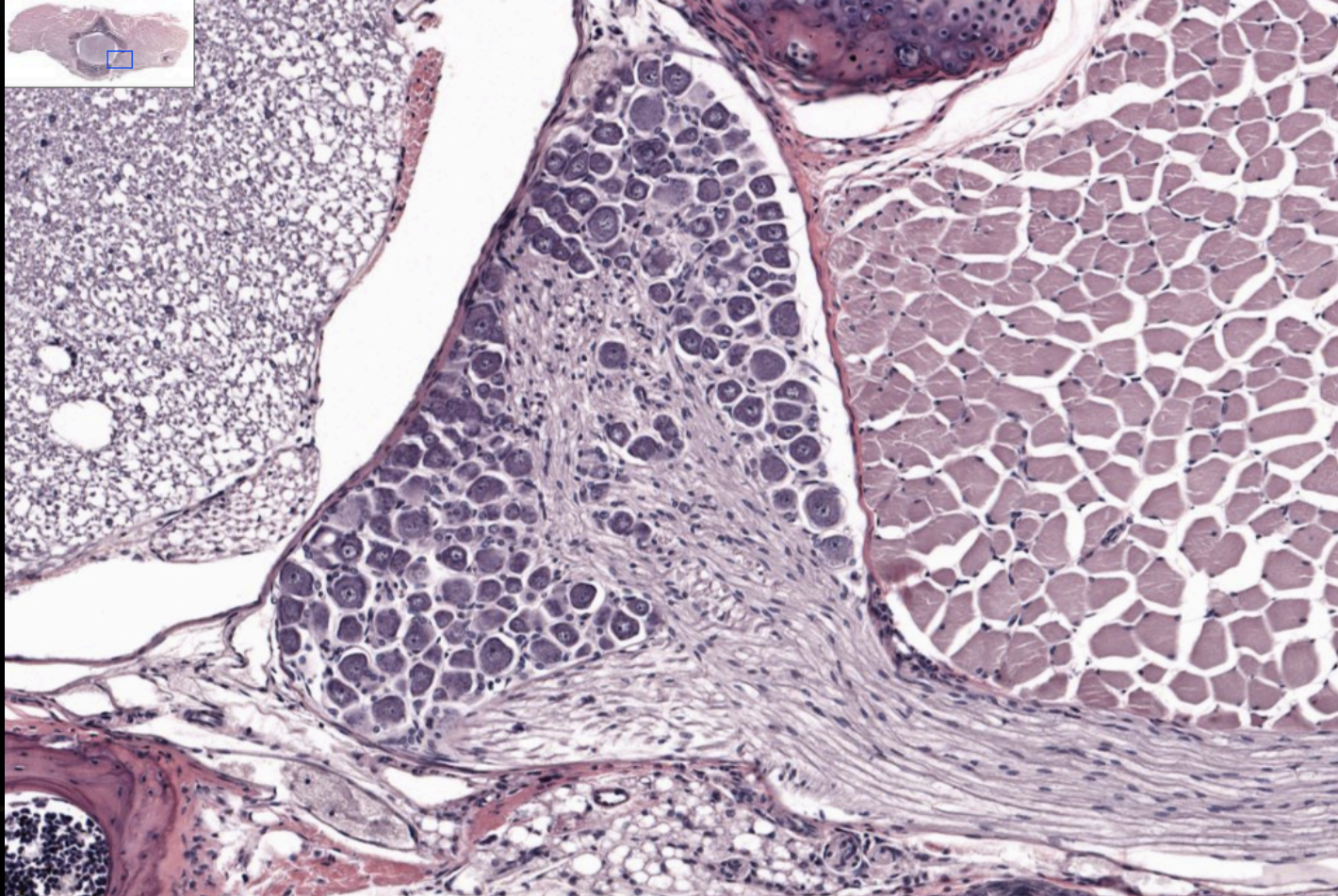
GÂNGLIOS NERVOSOS

- **GÂNGLIOS SENSITIVOS**
 - gânglio da raiz dorsal posterior
 - gânglios craniais

- **GÂNGLIOS AUTÔNOMOS**
 - simpático
 - parassimpático
 - terminais

Gânglios periféricos (sensitivos e autônomos)

- **GÂNGLIOS SENSITIVOS**
gânglio da raiz dorsal posterior



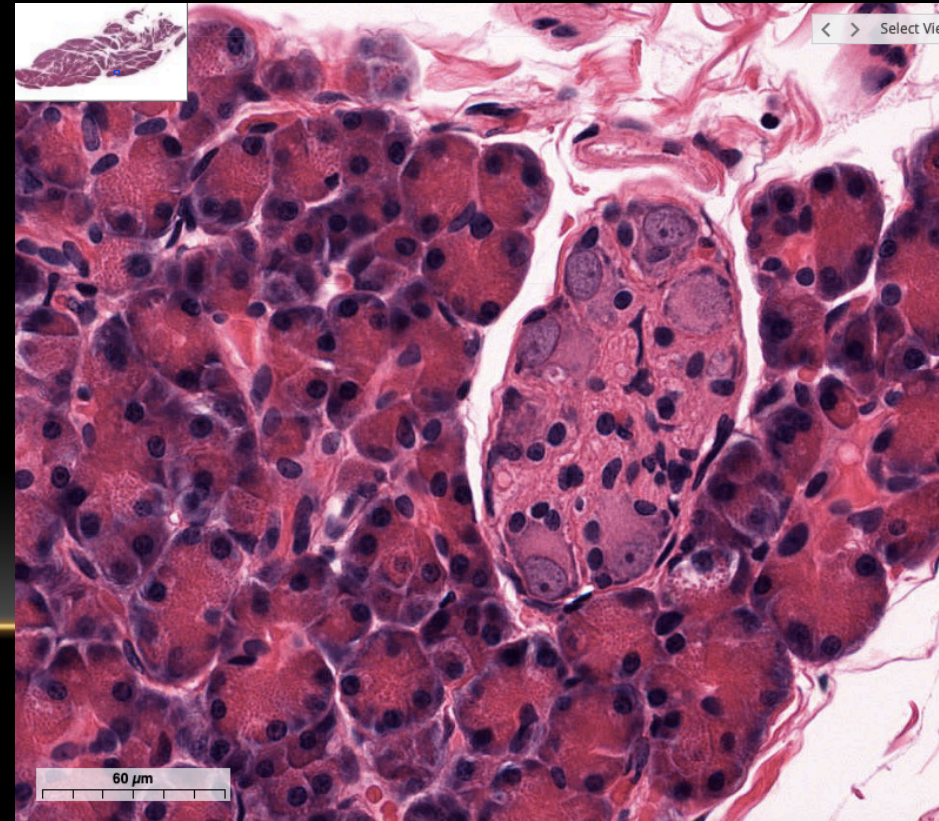
Gânglios periféricos (sensitivos e autônomos)

- GÂNGLIOS AUTÔNOMOS

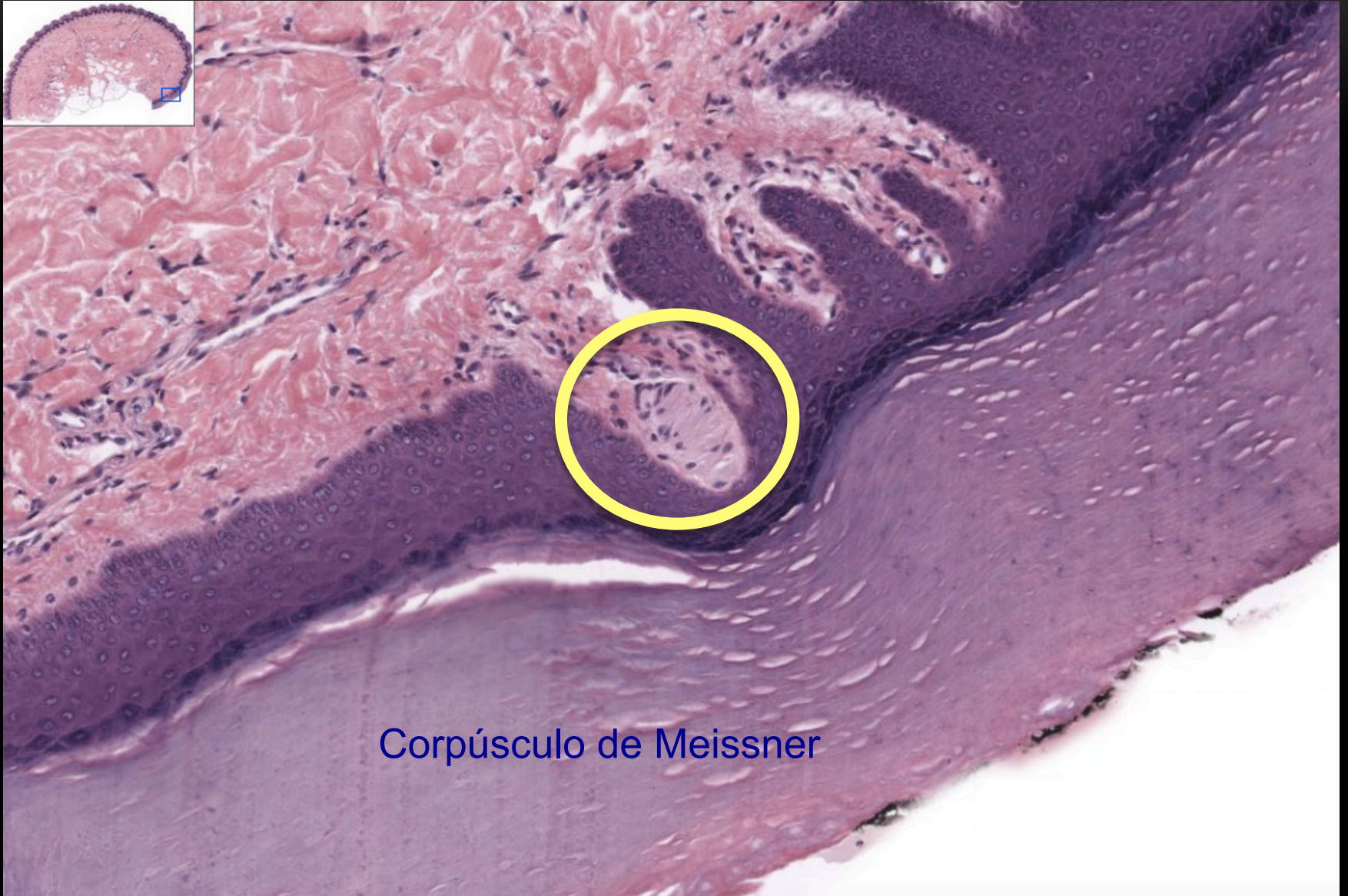
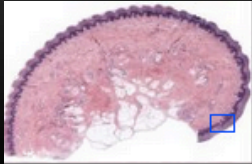


simpático

parassimpático

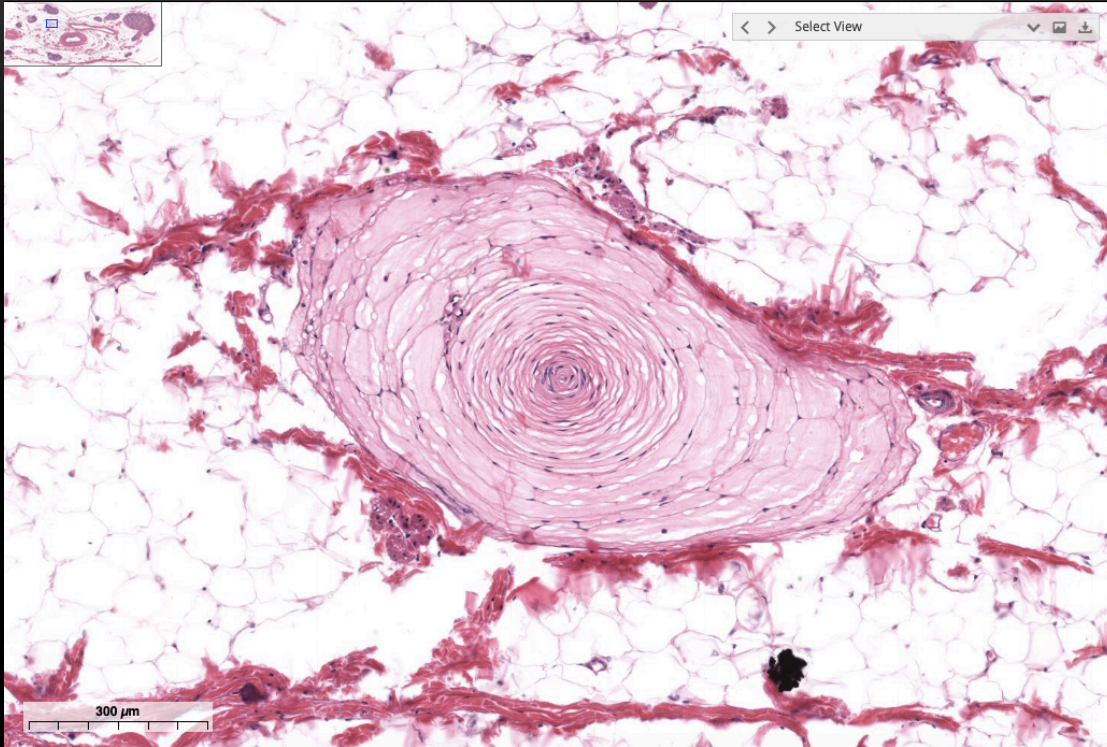


Terminações nervosas

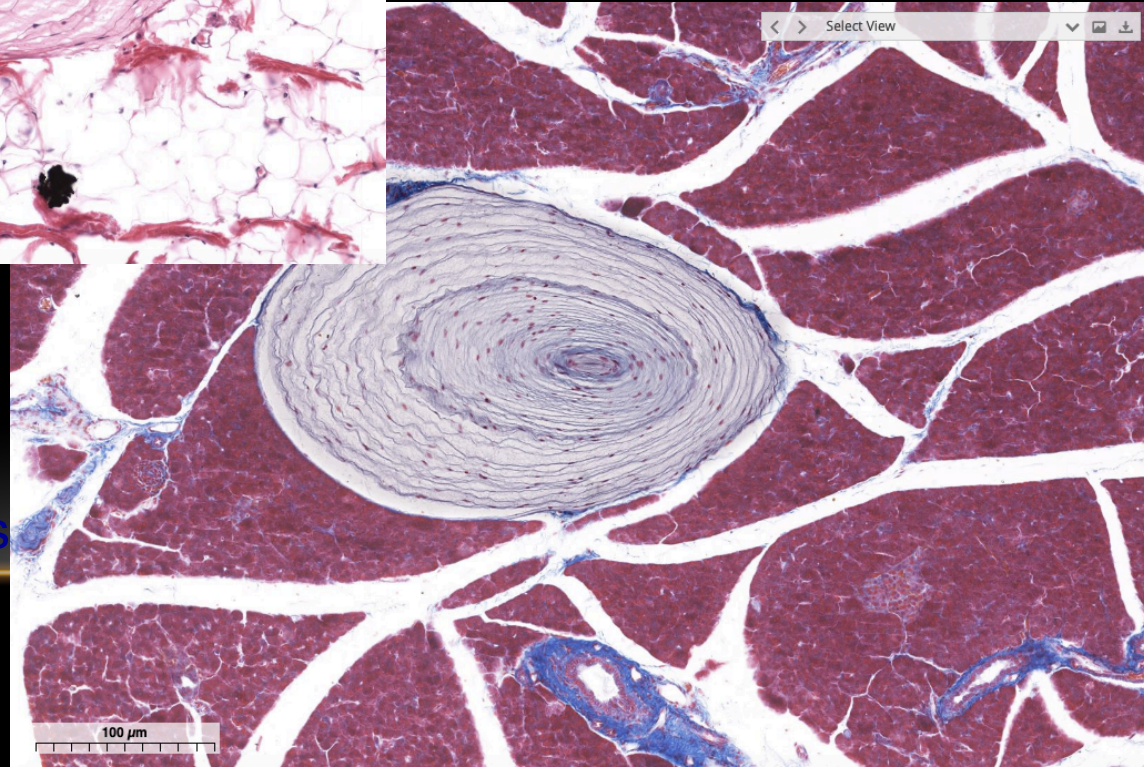


Corpúsculo de Meissner

Terminações nervosas



Corpúsculo de Pacini



Corpúsculo