

A célula vegetal

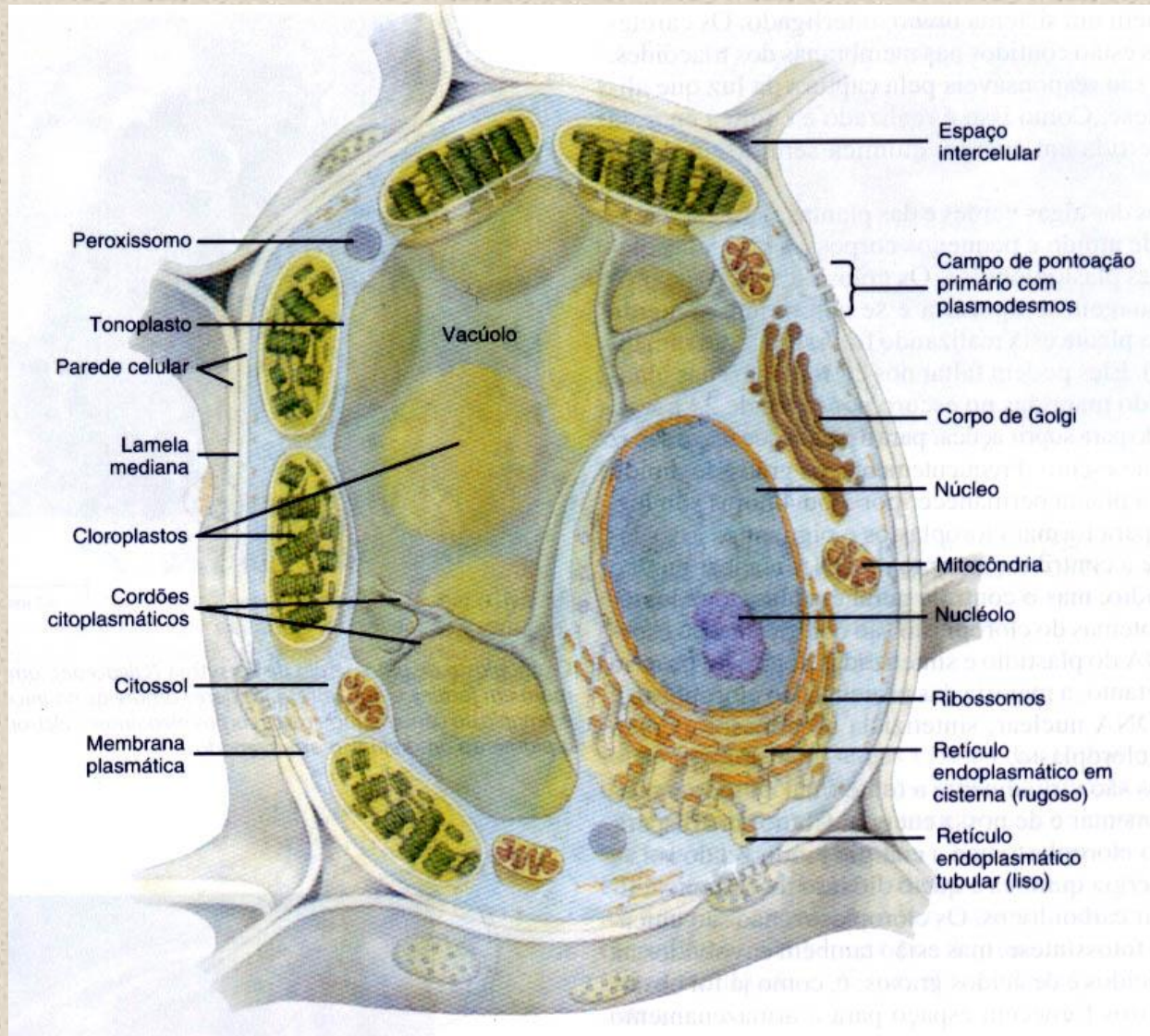
Prof. Dr. Diego Demarco

Assistam esta aula online em

<http://eaulas.usp.br/portal/video.action?idItem=18896>

CÉLULA VEGETAL

(PAREDE CELULAR + PROTOPLASTO)

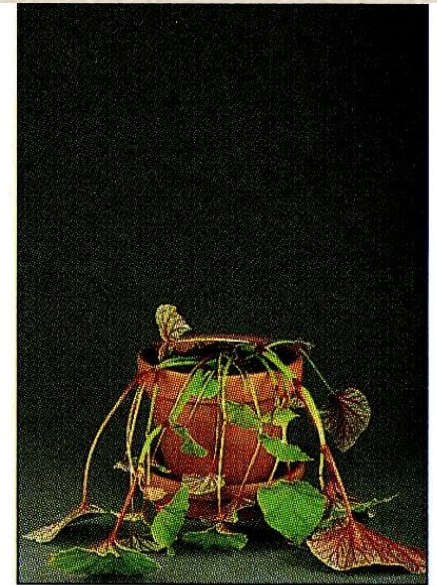


PAREDE CELULAR

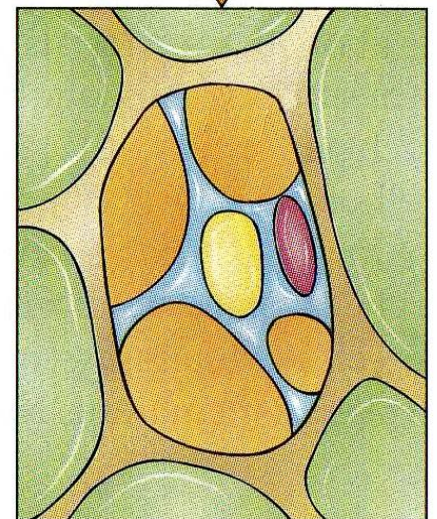
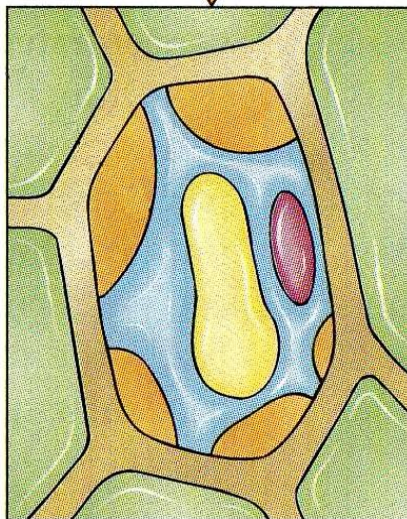
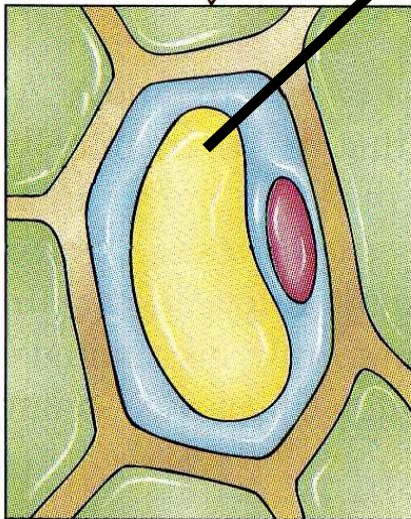
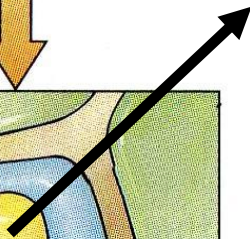
- **Composta por:**
 - Parede Primária
 - Parede Secundária



- ***Funções:***
 - Confere forma à célula
 - importante papel na absorção, transporte e secreção
 - defesa do vegetal contra agentes patogênicos



Vacúolo



Célula Túrgida

Célula Plasmolisada

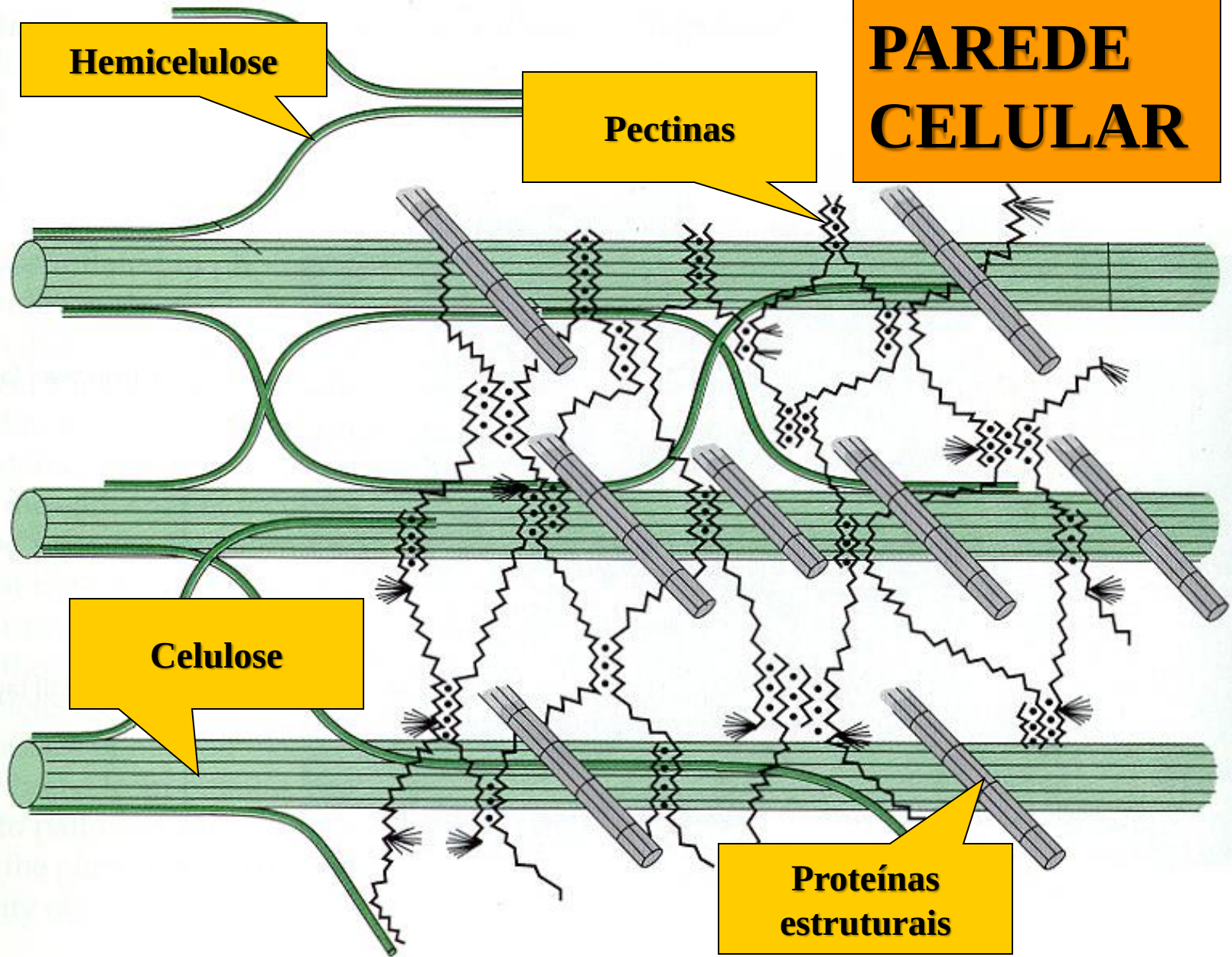
PAREDE CELULAR

Hemicelulose

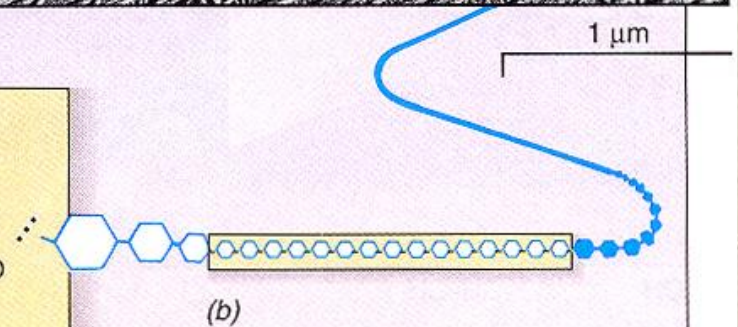
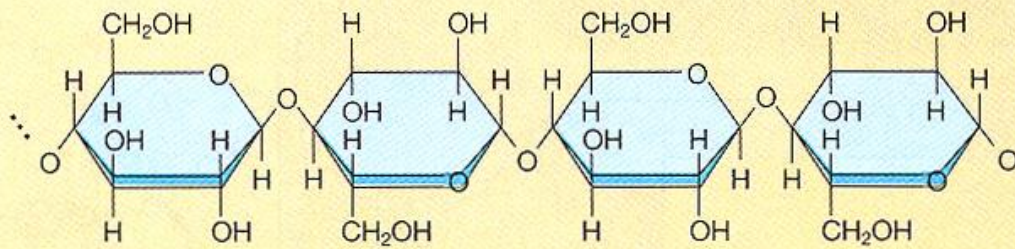
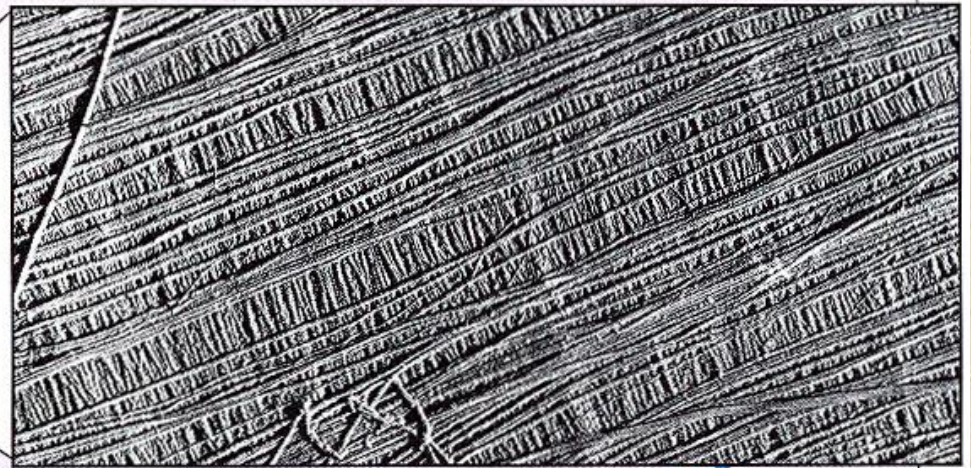
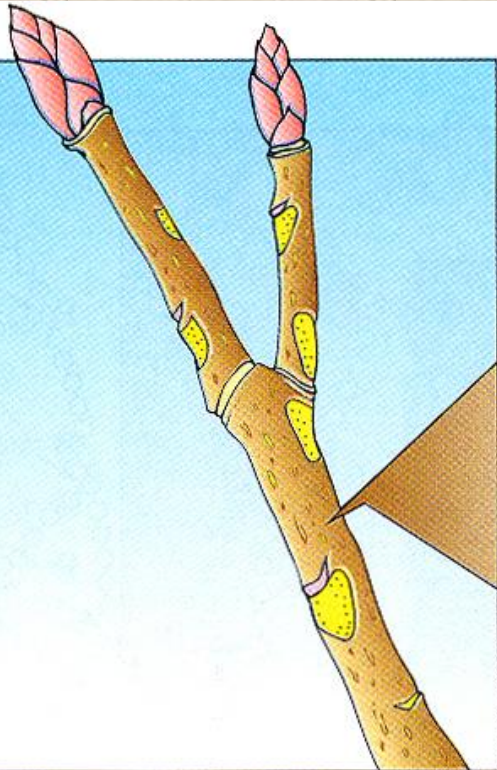
Pectinas

Celulose

Proteínas
estruturais



CELULOSE



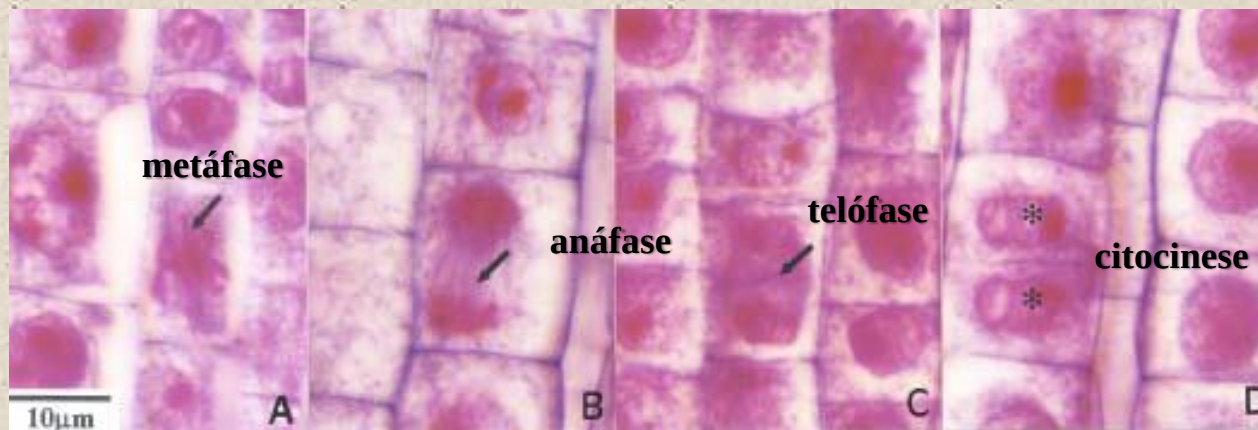
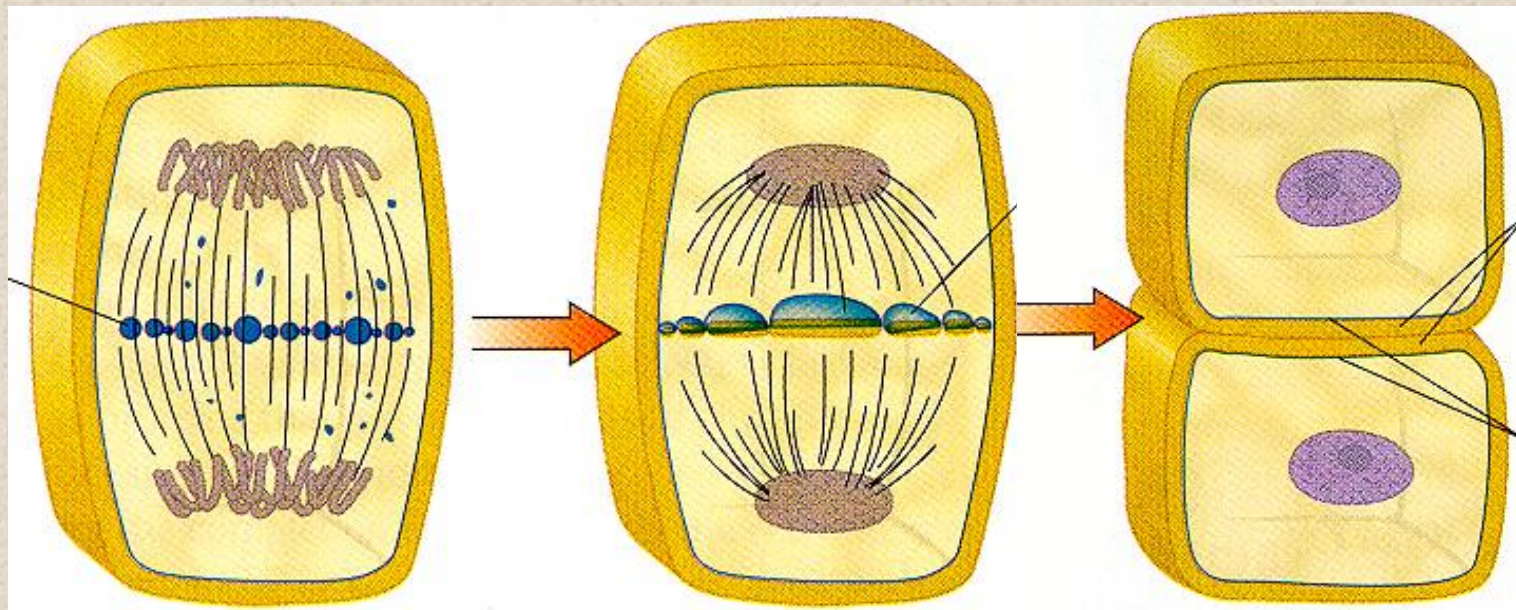
Parede primária

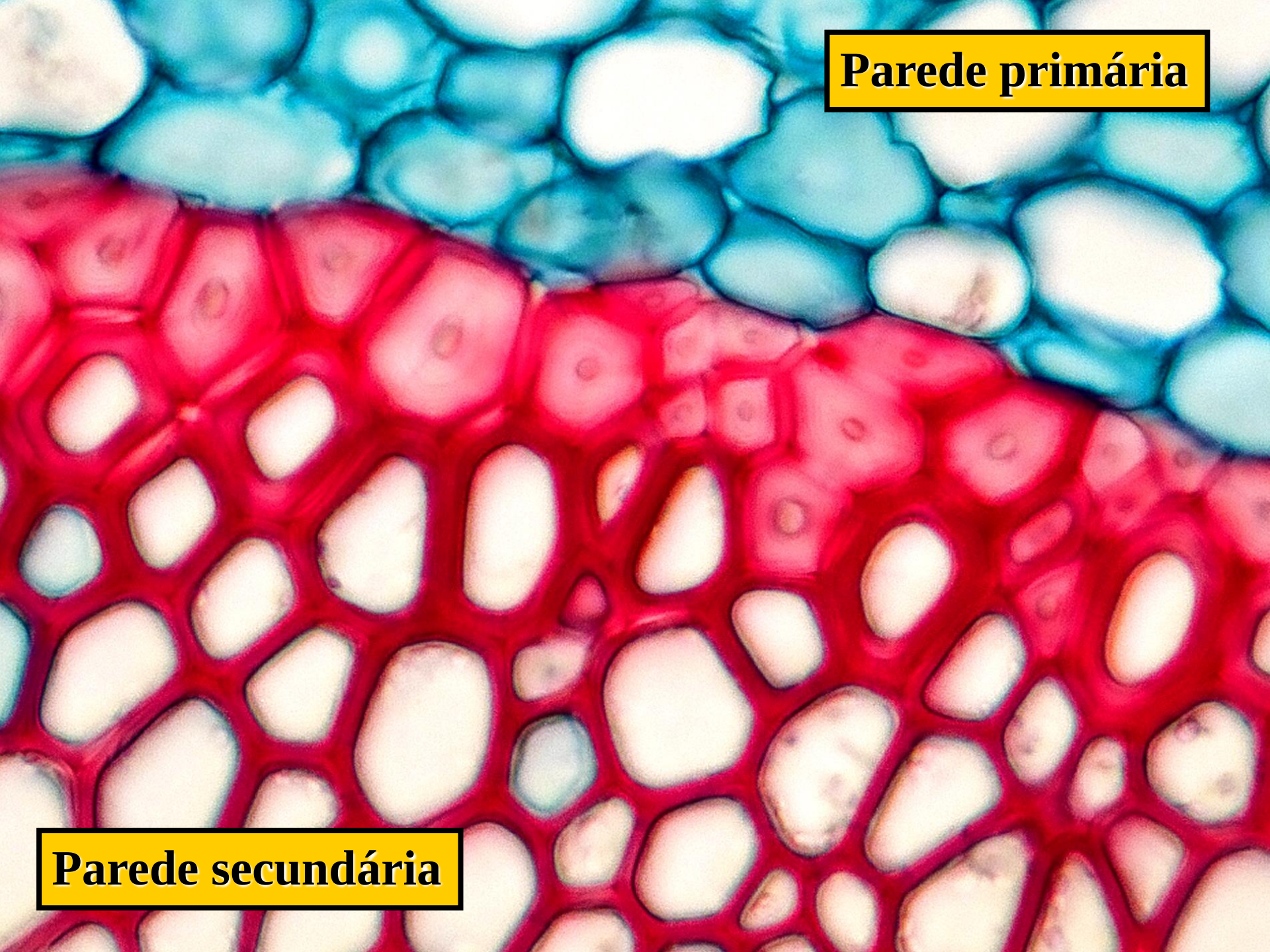
- Todas as células possuem
- Formada durante a mitose
- Única parede durante o alongamento celular

Parede Secundária

- Nem todas as células possuem
- Constituição semelhante à primária, mas com concentrações diferentes de cada um dos compostos. **Podem ser lignificadas**
- Formada após o término da expansão celular

Formação da parede durante a divisão celular



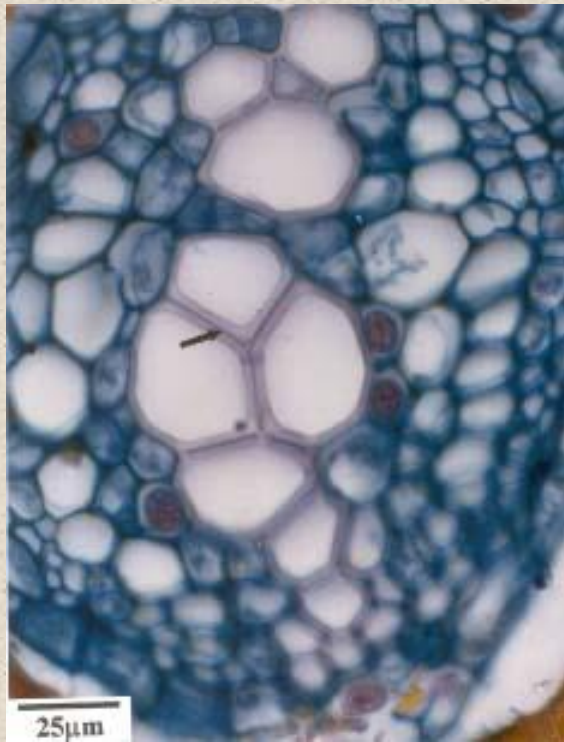


A micrograph of plant tissue showing two distinct layers of cells. The upper layer consists of cells with thin, blue-stained walls. The lower layer consists of cells with thick, red-stained walls and large, clear central vacuoles. The boundary between the two layers is clearly visible.

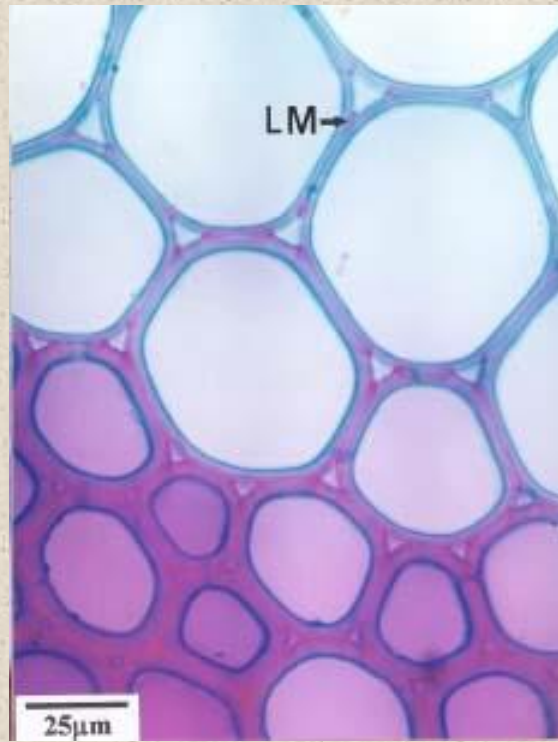
Parede primária

Parede secundária

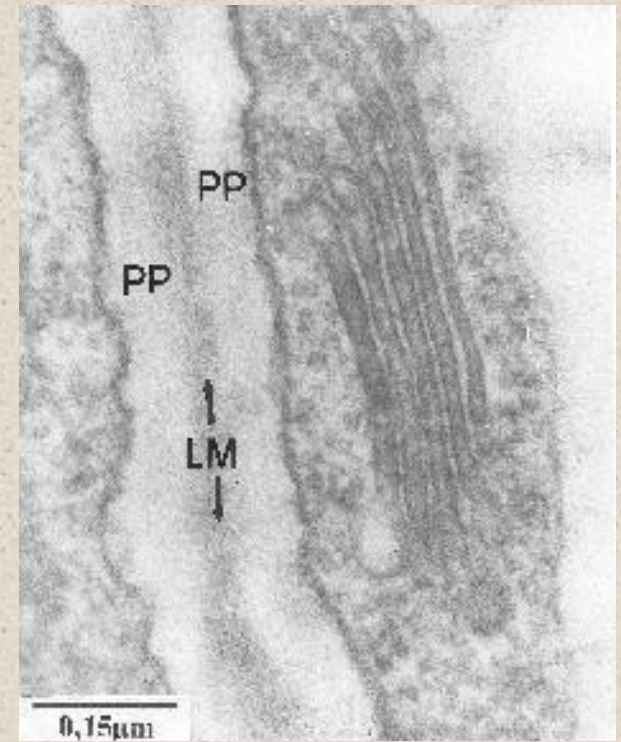
Lamela média – une células adjacentes



***Microgramma
squamulosa***



Hemerocallis fava



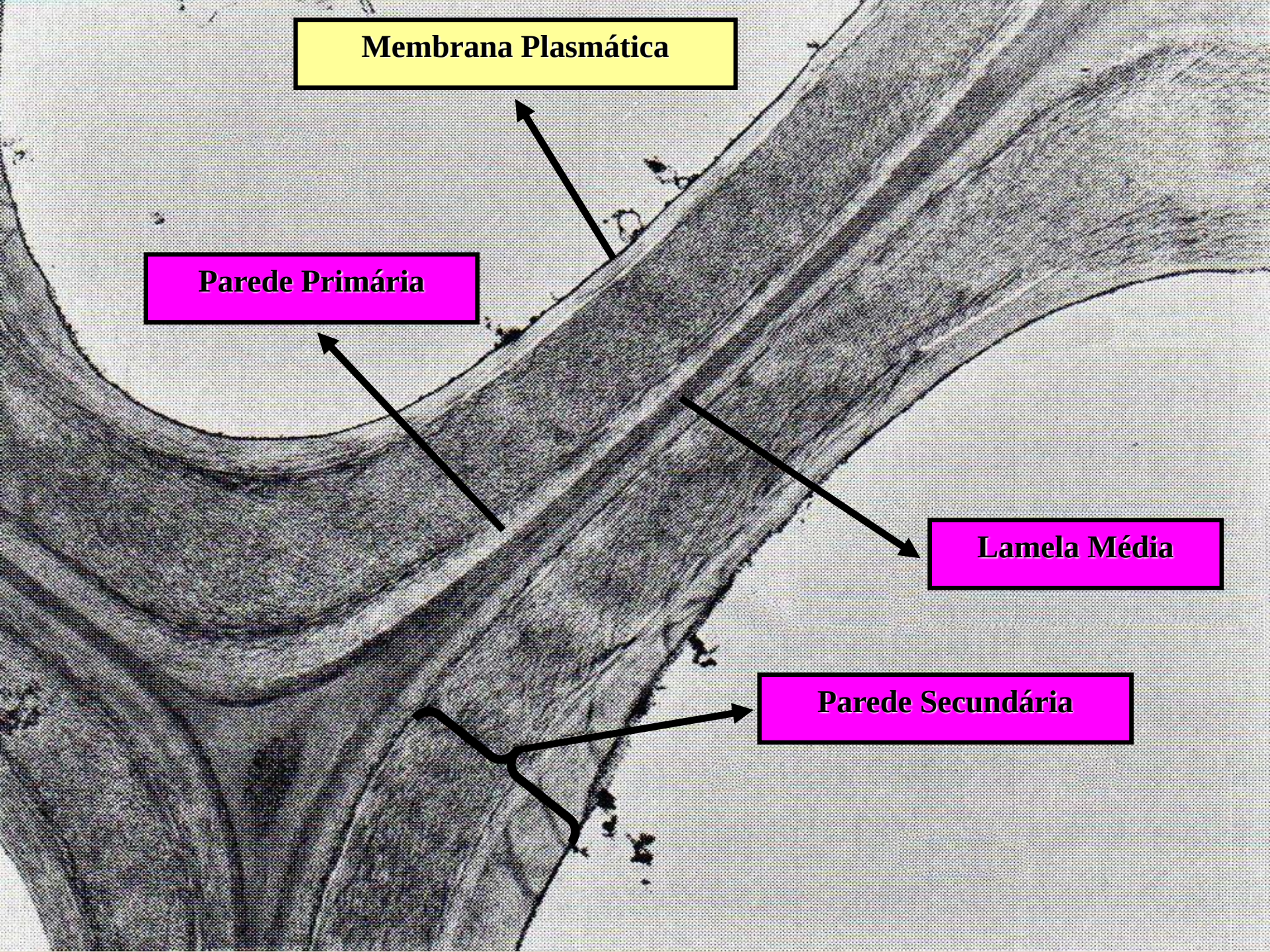
Eucalyptus sp

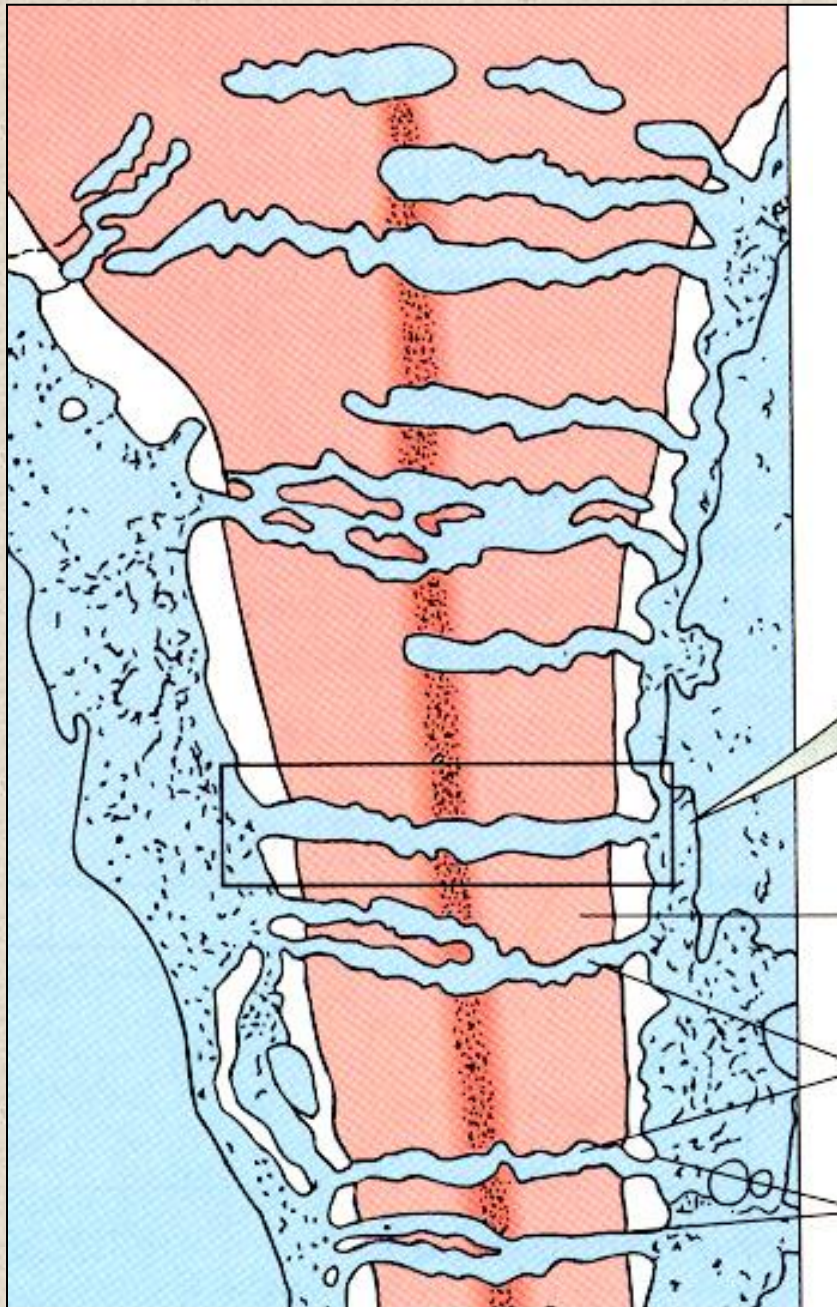
Membrana Plasmática

Parede Primária

Lamela Média

Parede Secundária



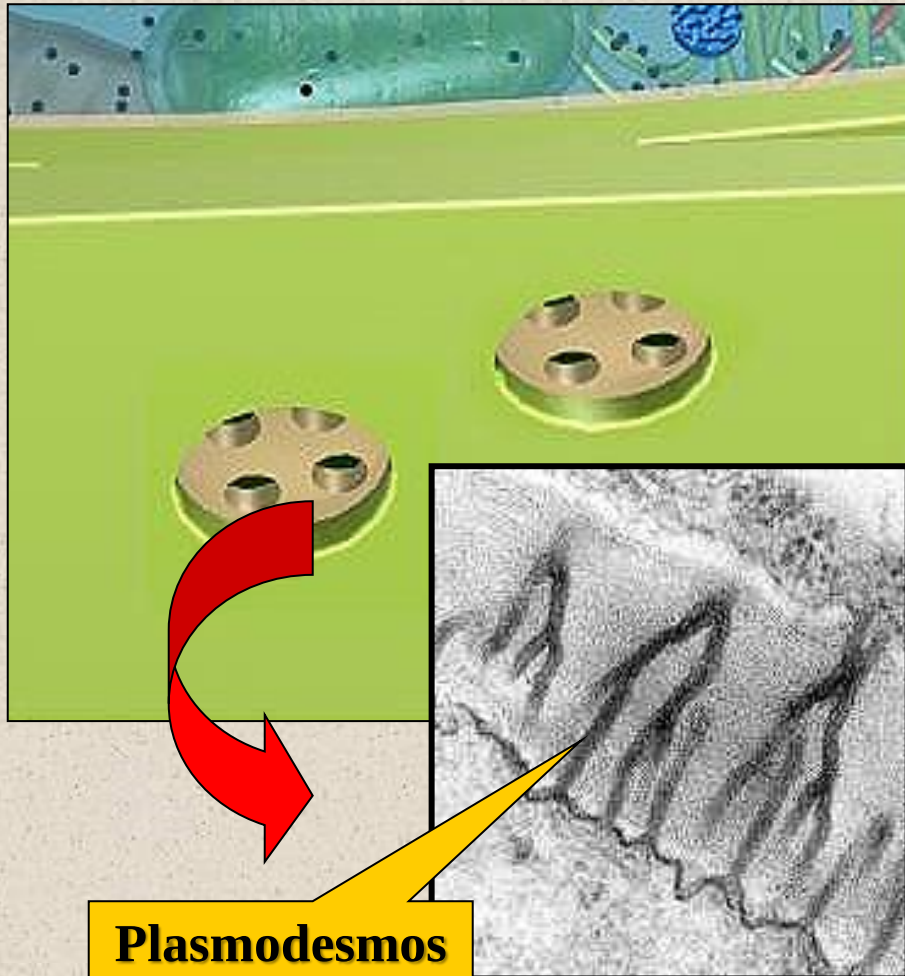


**Conexões
citoplasmáticas**

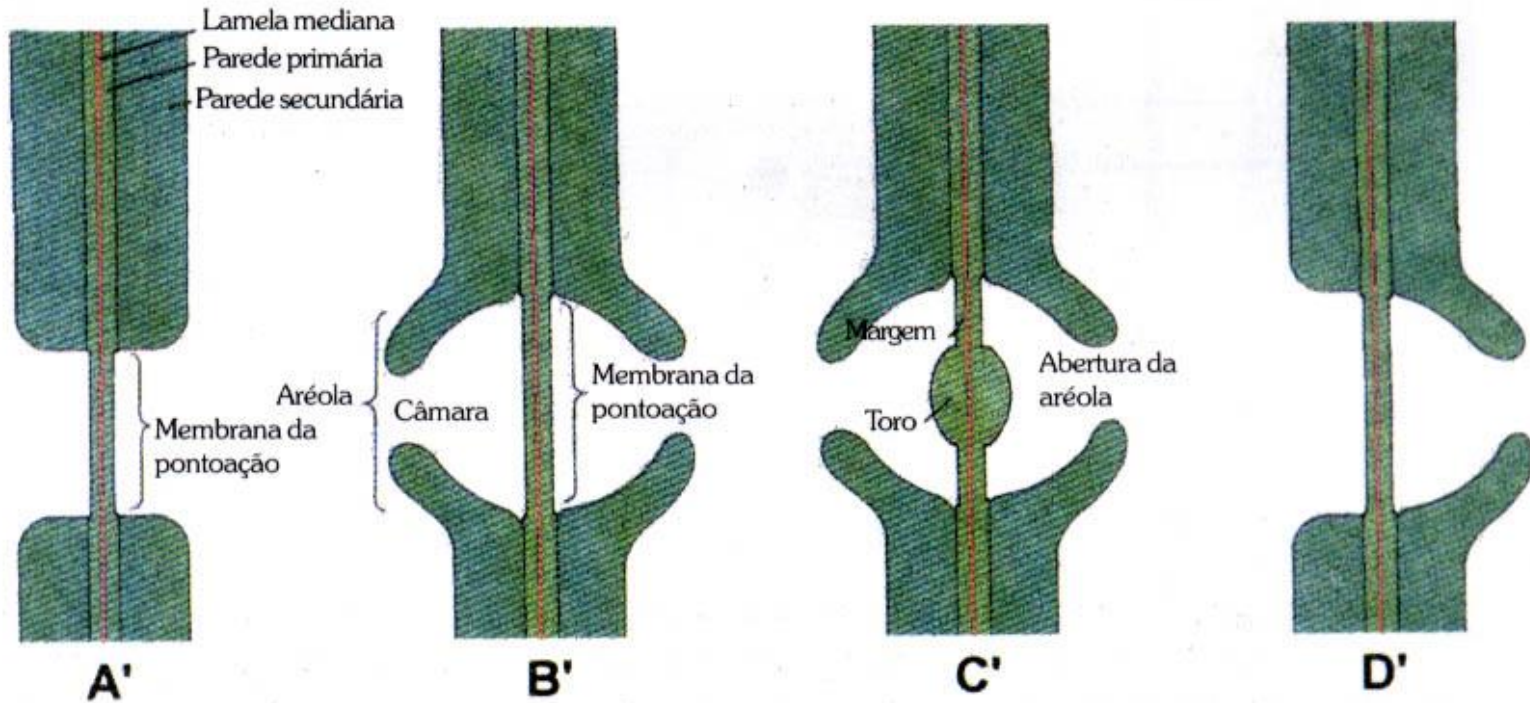
PLASMODESMO

**Comunicação
Intercelular**

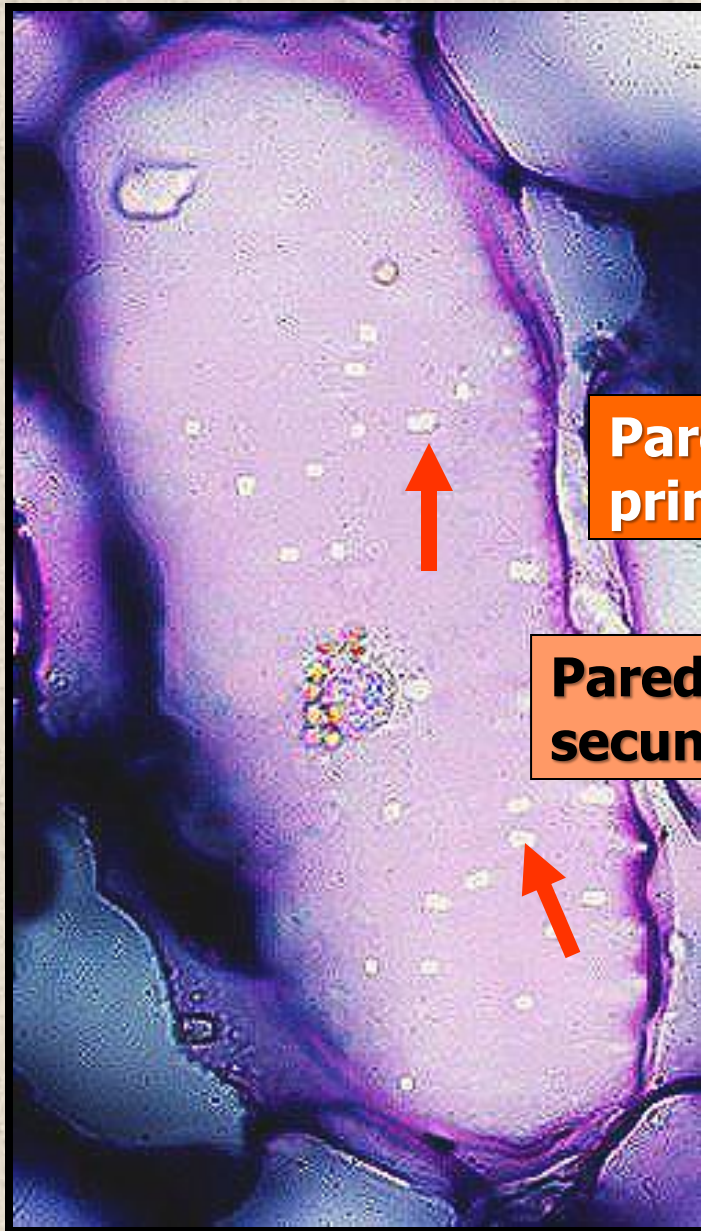
CAMPO PRIMÁRIO DE PONTOAÇÃO



Pontoação da parede vegetal



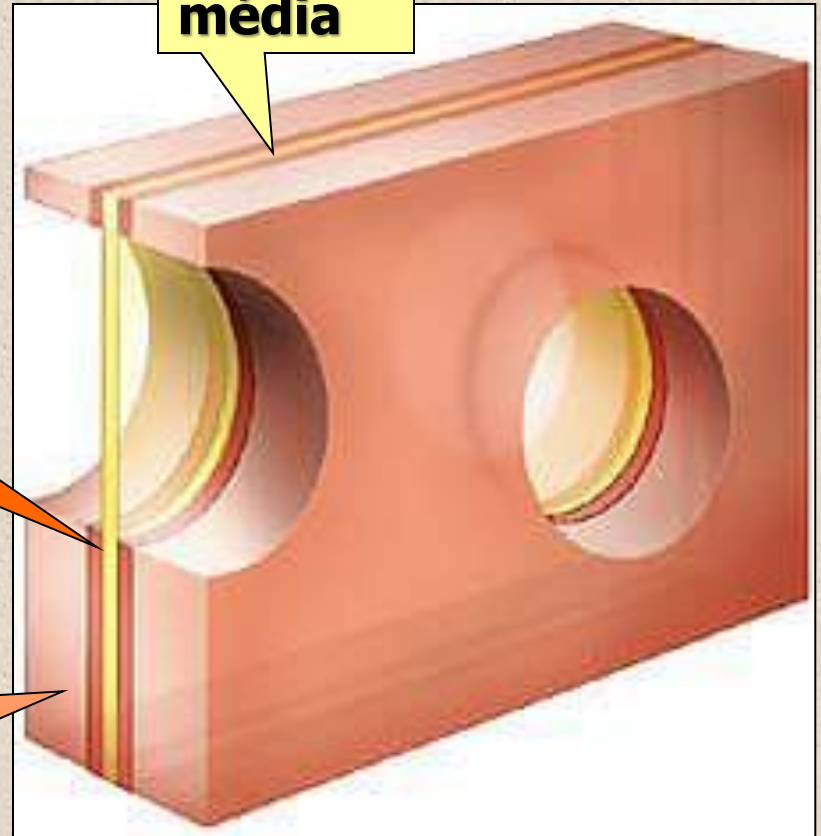
Alguns tipos de pontoação. A-D – Vistas frontal e lateral. A'-D' – Vista lateral, em corte.
A, A' – Par de pontoação simples. B, B' – Par de pontoação areolada.
C, C' – Par de pontoação areolada com toro. D, D' – Par de pontoação semi-areolada.



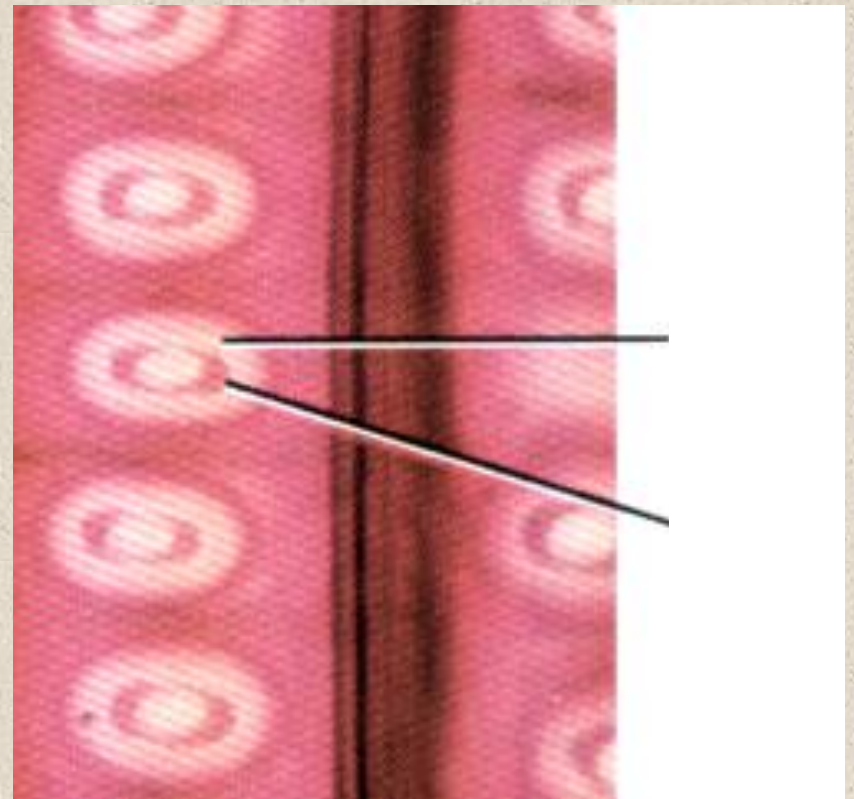
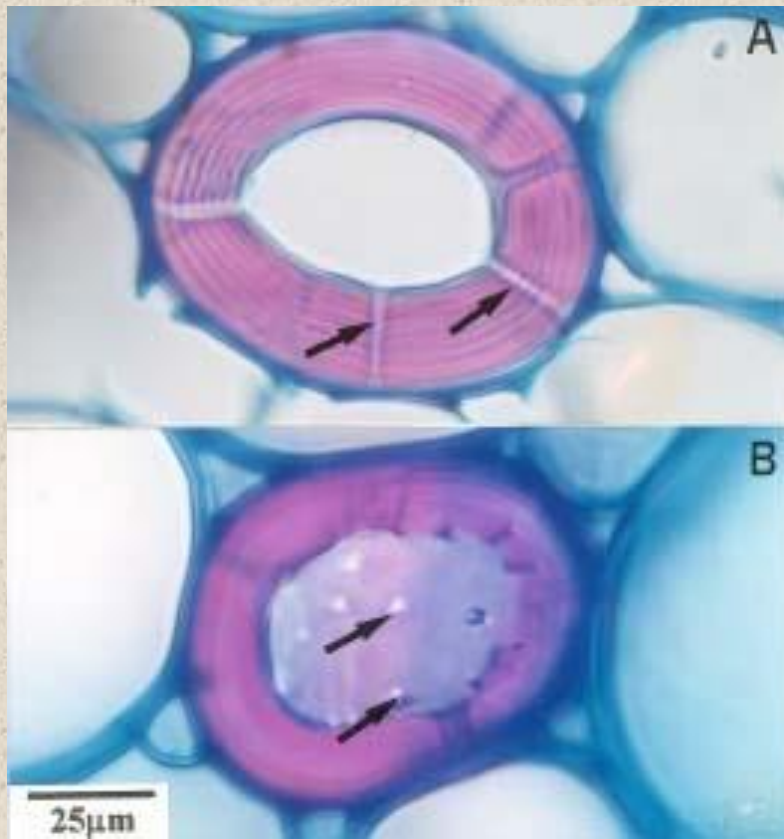
Parede primária

Parede secundária

Lamela média



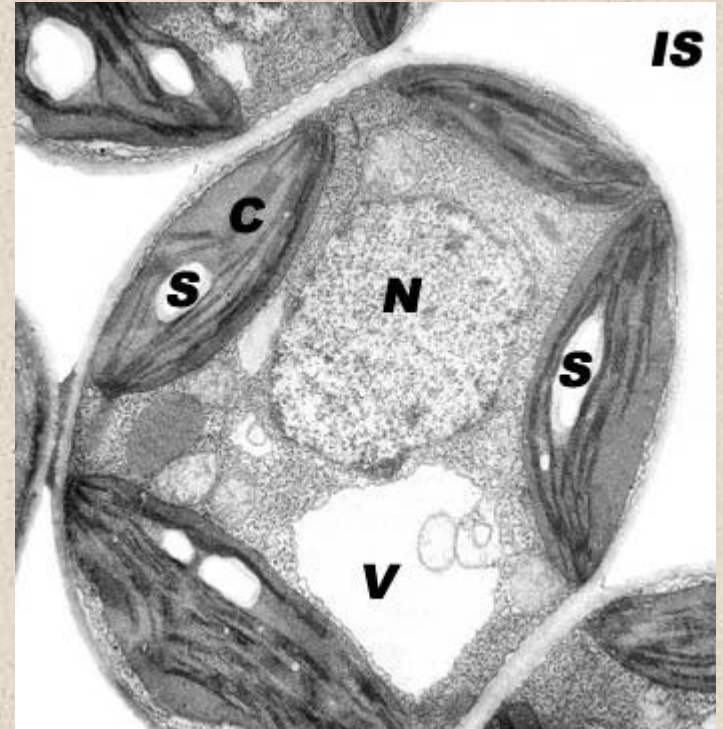
PONTOAÇÃO

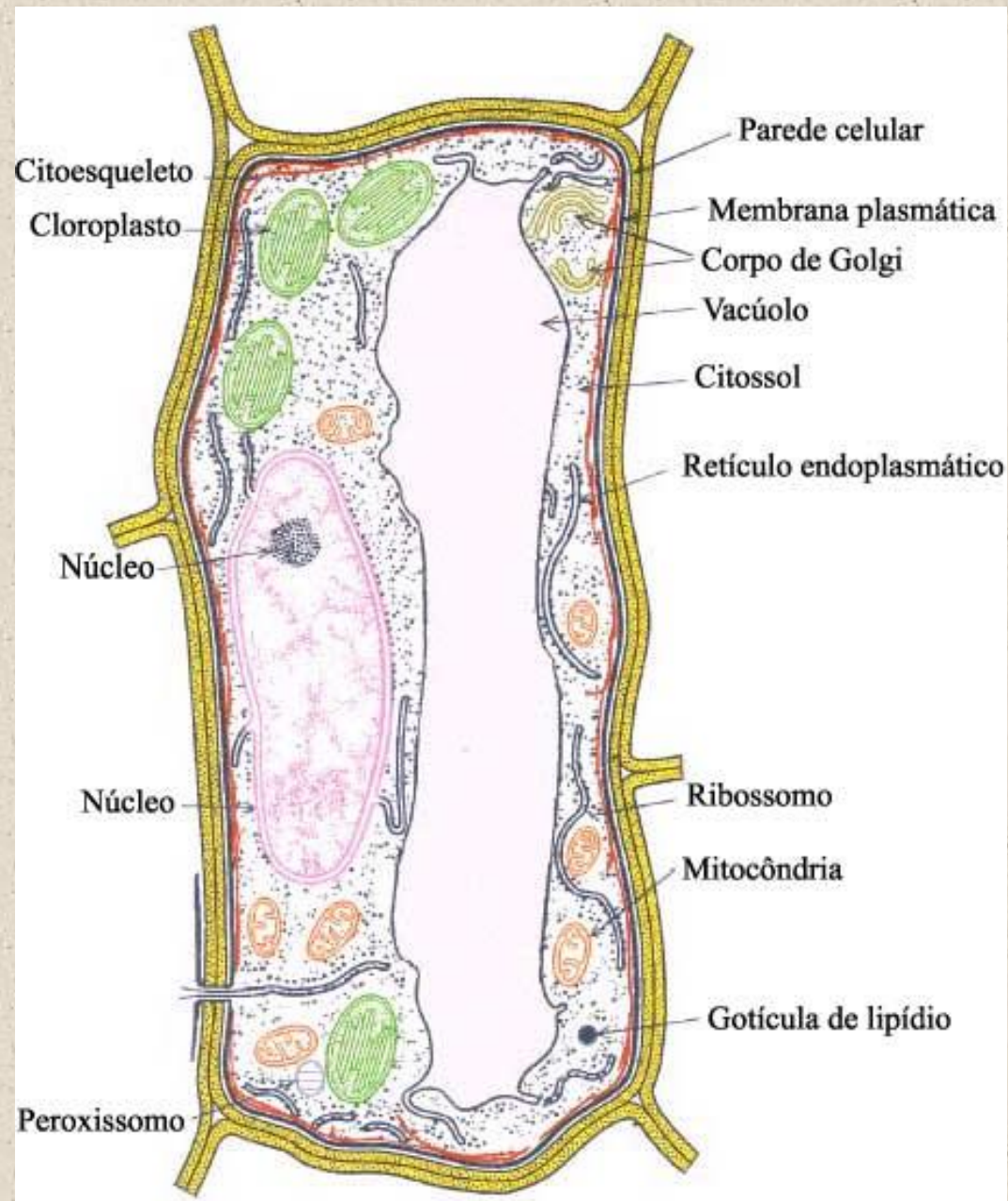


PONTOAÇÕES

Protoplasto

- Composto por:
 - Membrana plasmática
 - Núcleo
 - Citoplasma:
 - Plastídeos
 - Mitocôndrias
 - Vacúolos
 - Retículo Endoplasmático
 - Complexo de Golgi (Dictiossomos)
 - Ribossomos

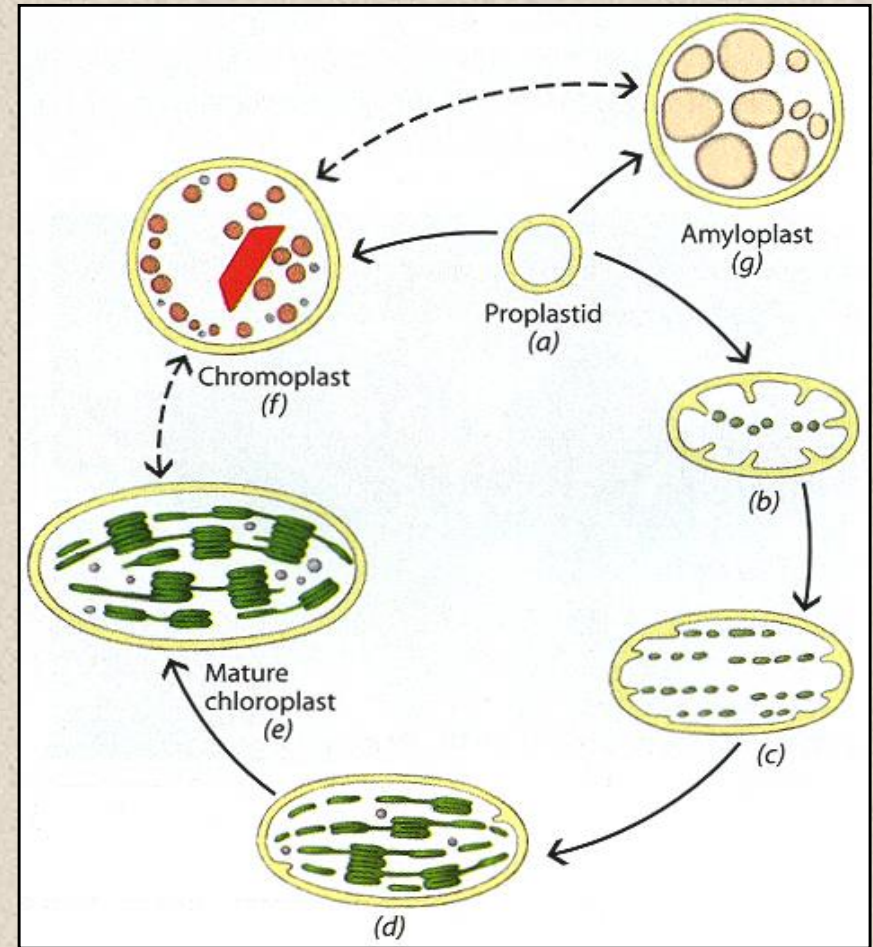




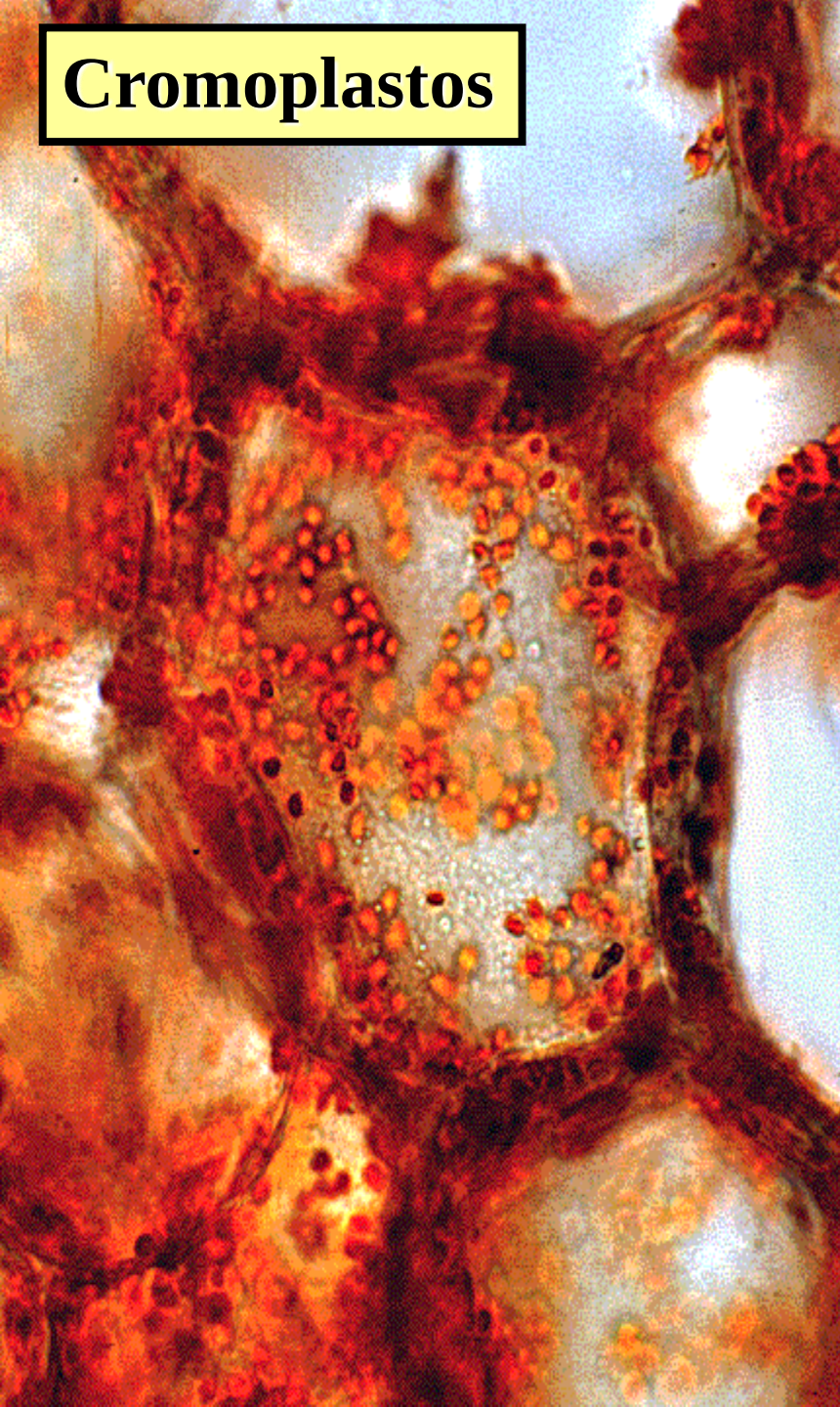
• Plastídeos

- Classificados de acordo com o pigmento predominante:

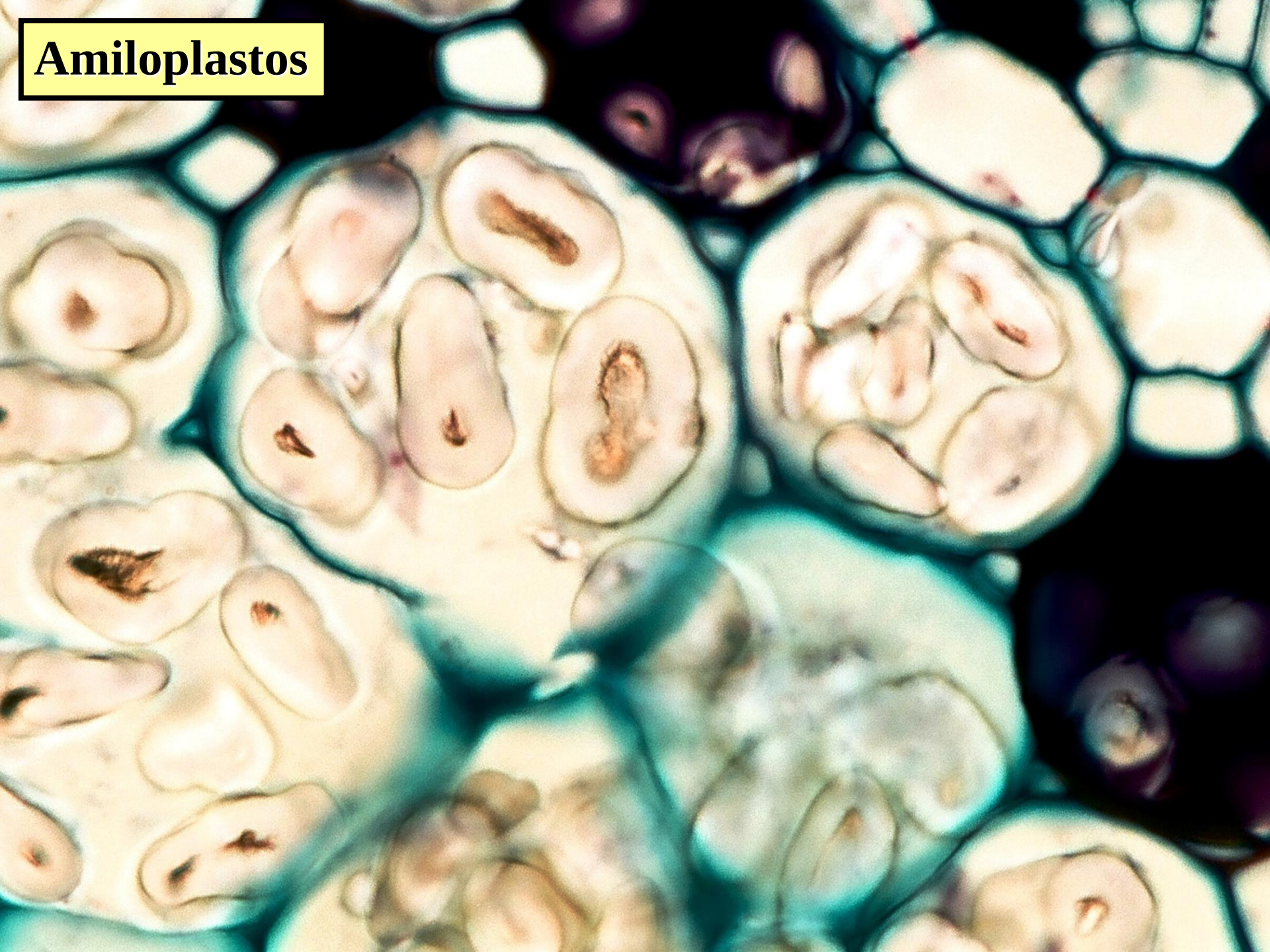
- CLOROPLASTOS
- CROMOPLASTOS
- LEUCOPLASTOS



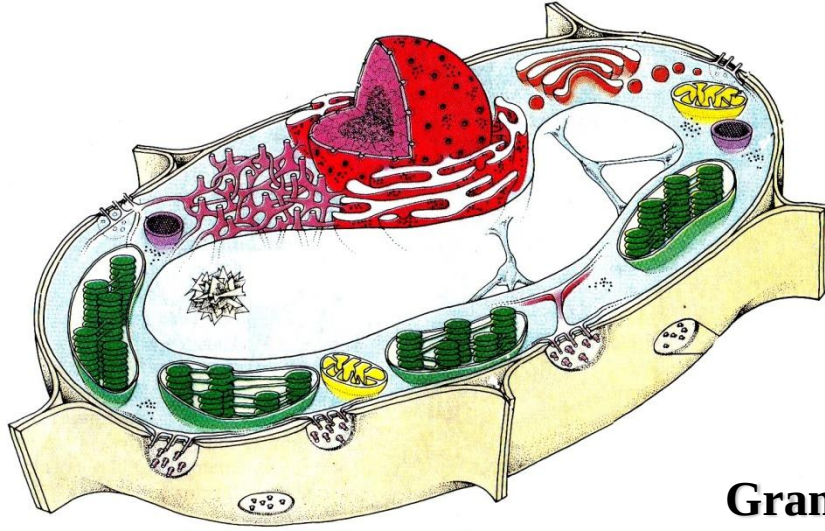
Cromoplastos



Amitoplastos

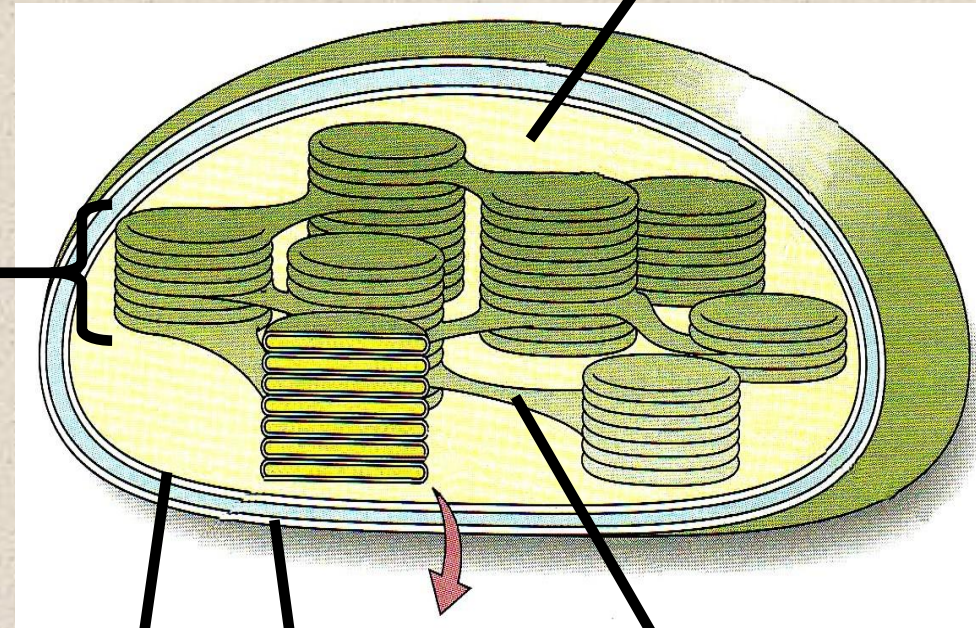


Cloroplasto



Grana

Estroma



Tilacóides

Membrana
Interna

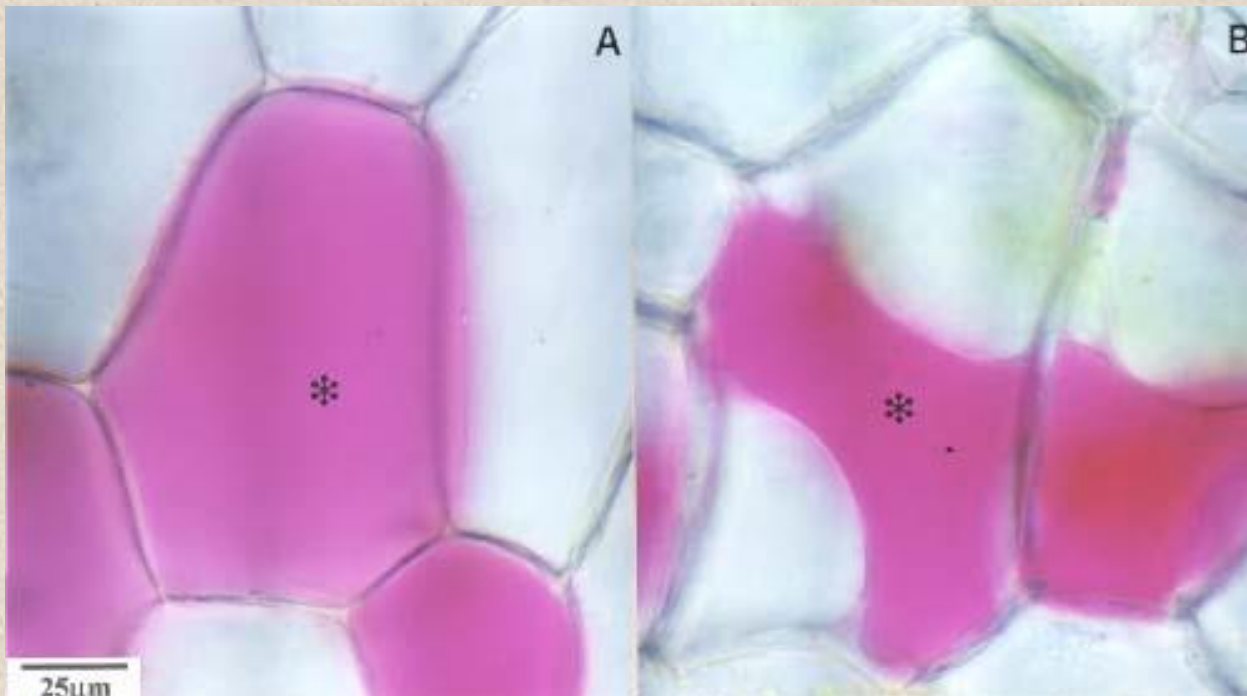
Membrana
Externa

Tilacóide do estroma
"Intergrana"



• Vacúolo

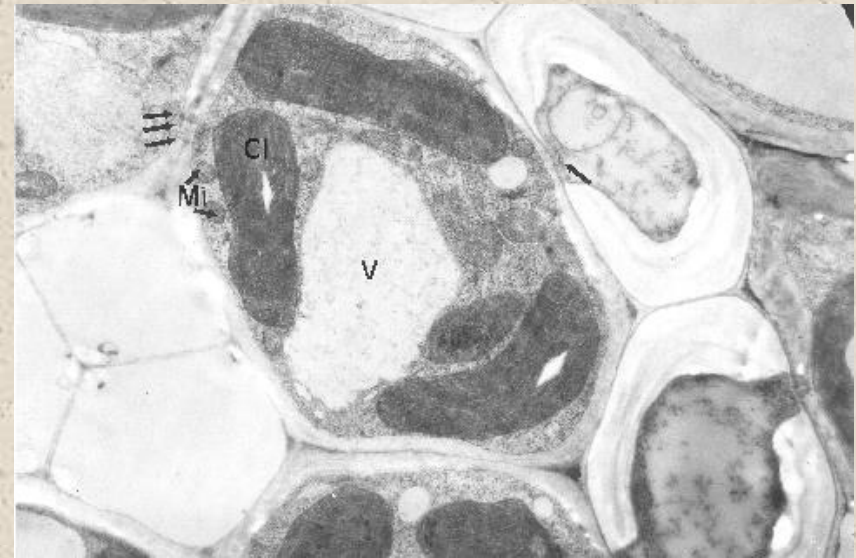
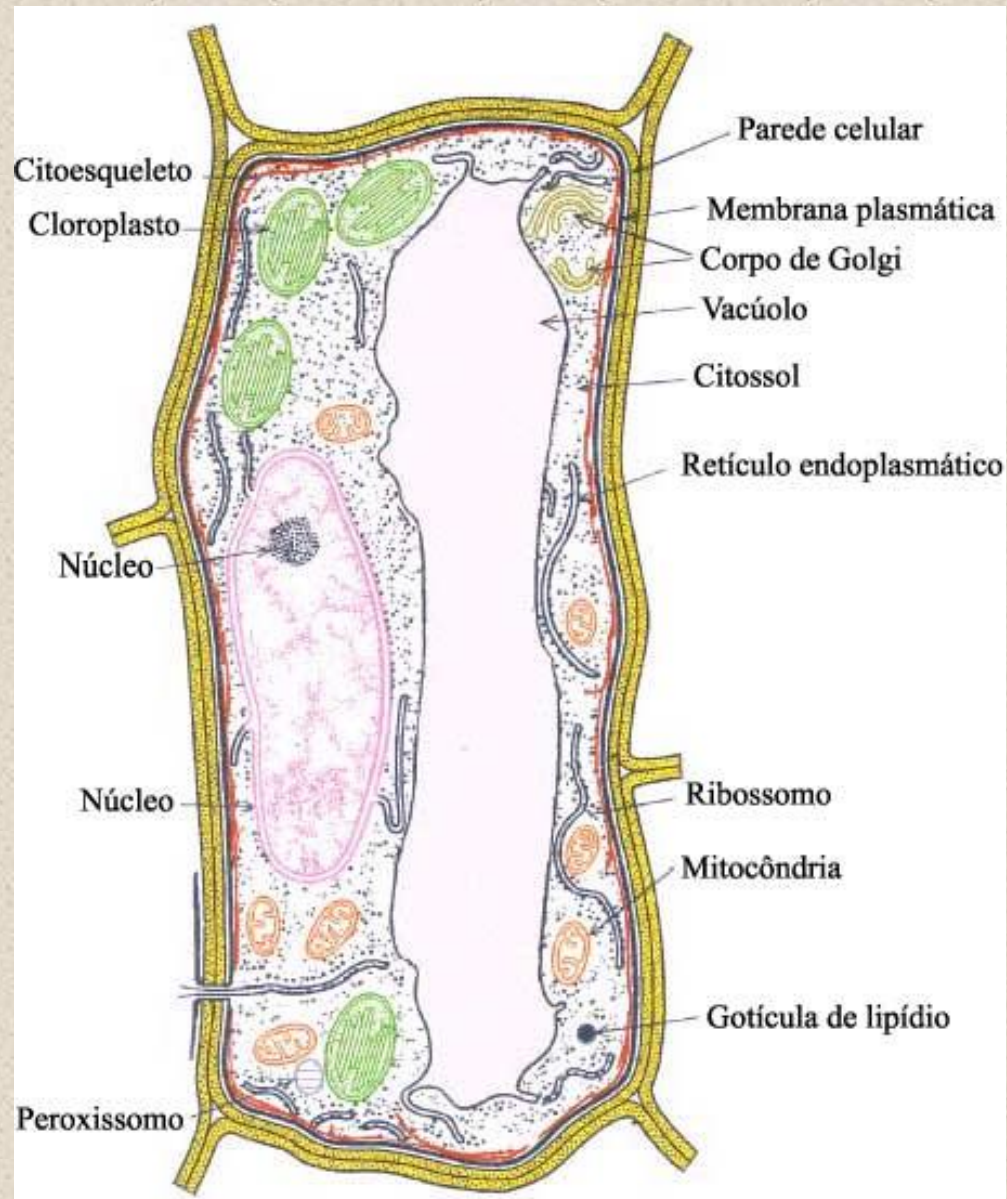
- Podem ocupar até 90% do volume da célula adulta
- Volume interno: água + substâncias orgânicas e inorgânicas
- Funções: reguladores do conteúdo de água e da pressão osmótica



Célula turgida

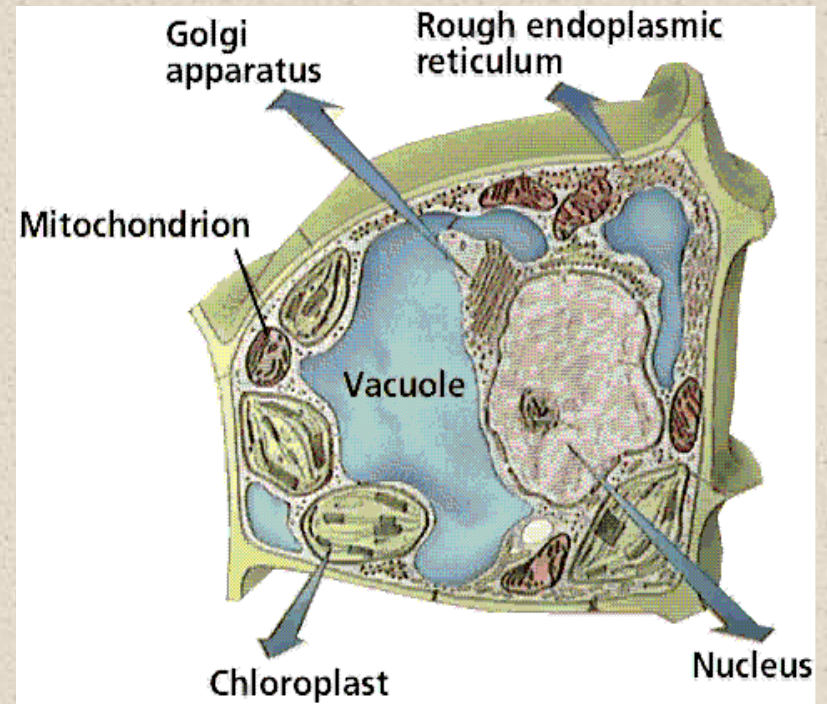
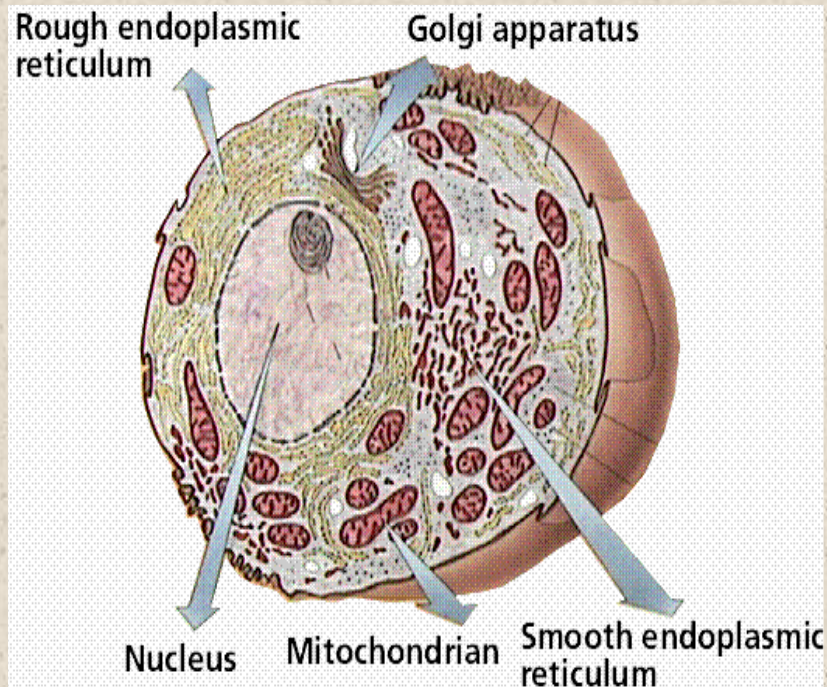
Célula plasmolisada

Vacúolo



Célula Animal X Célula Vegetal

- Presença de Parede celular
- Presença de plastídeos
- Vacúolos
- Presença de amido
- Presença de plasmodesmos



Dúvidas?

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