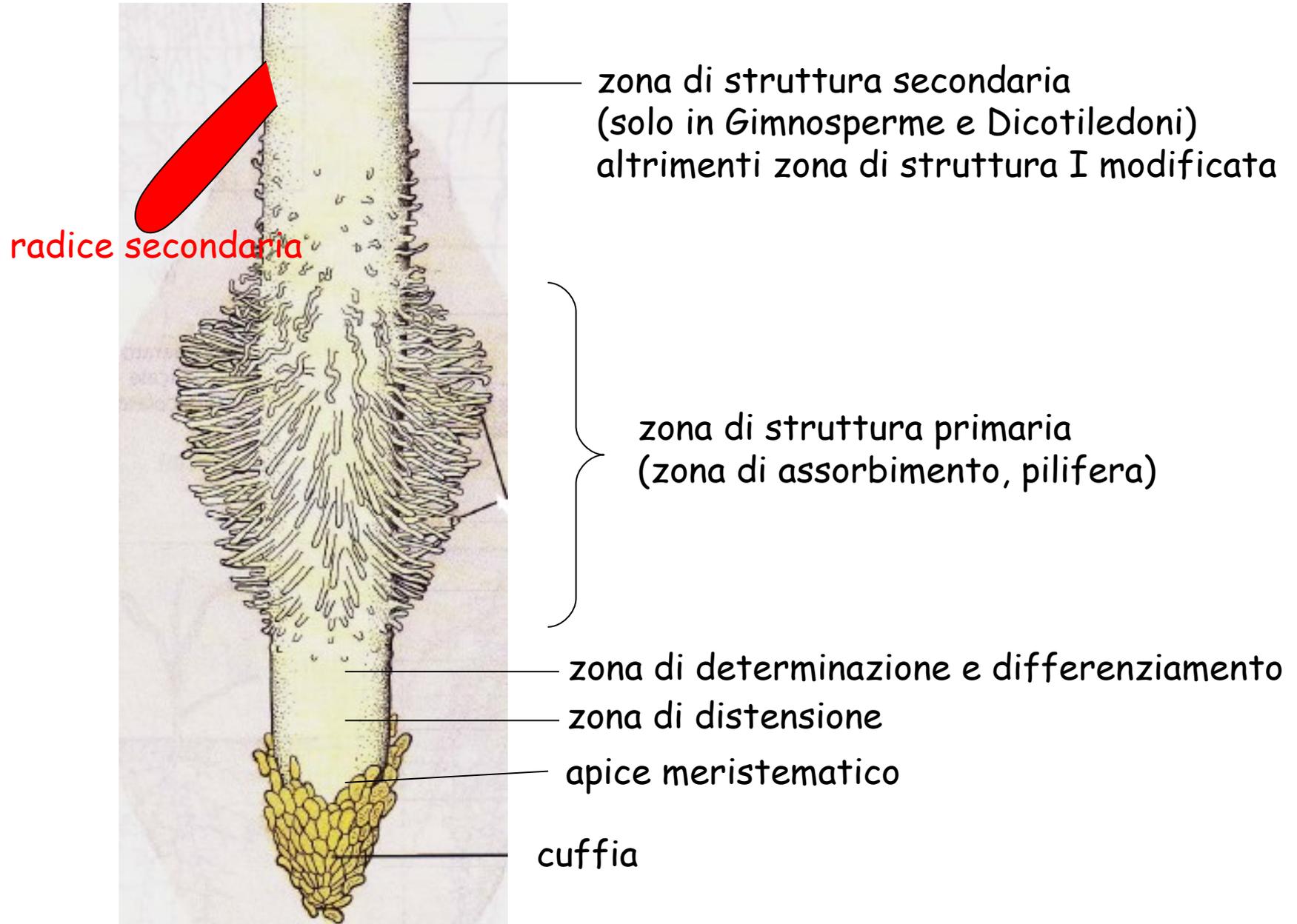
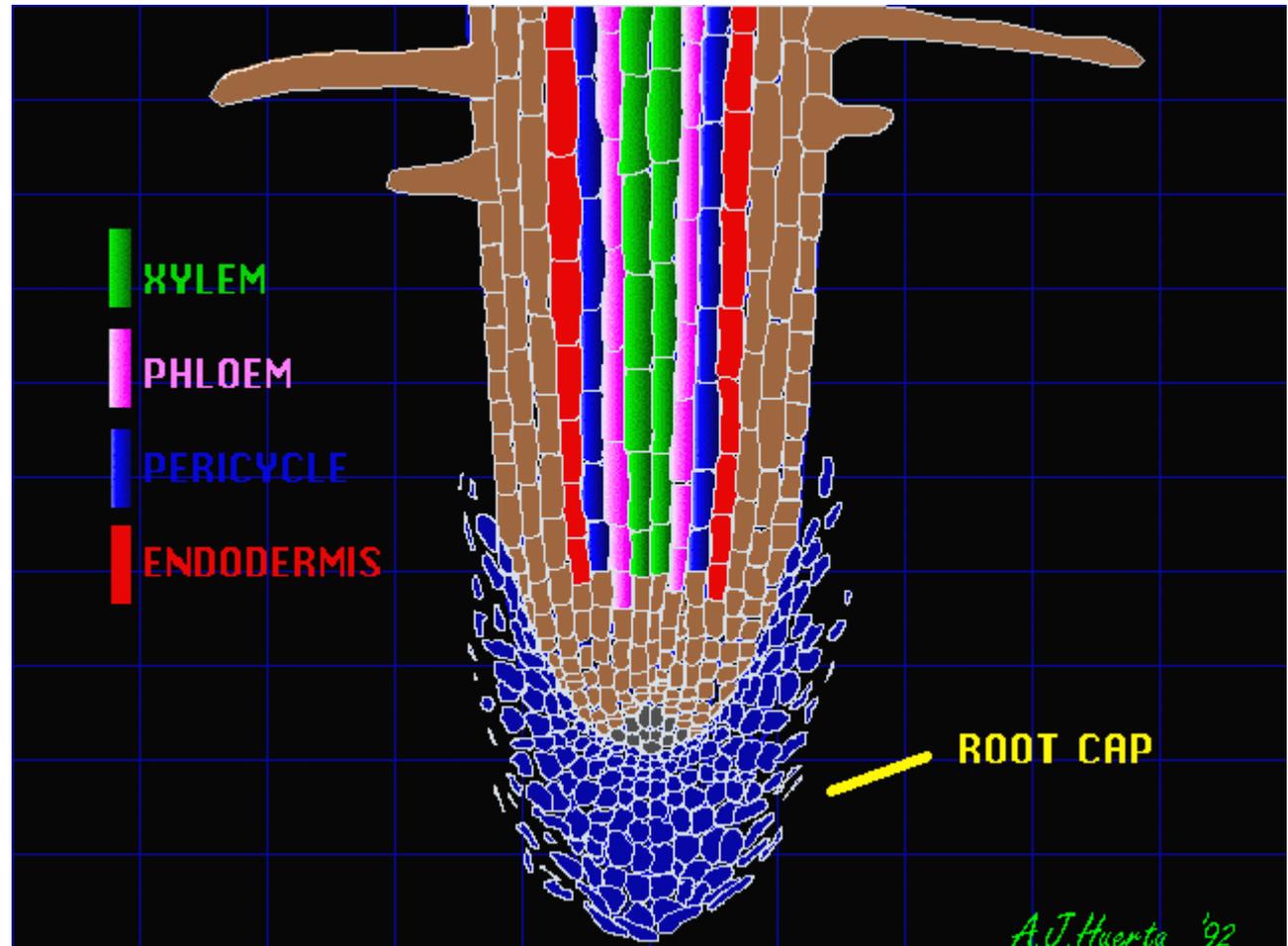
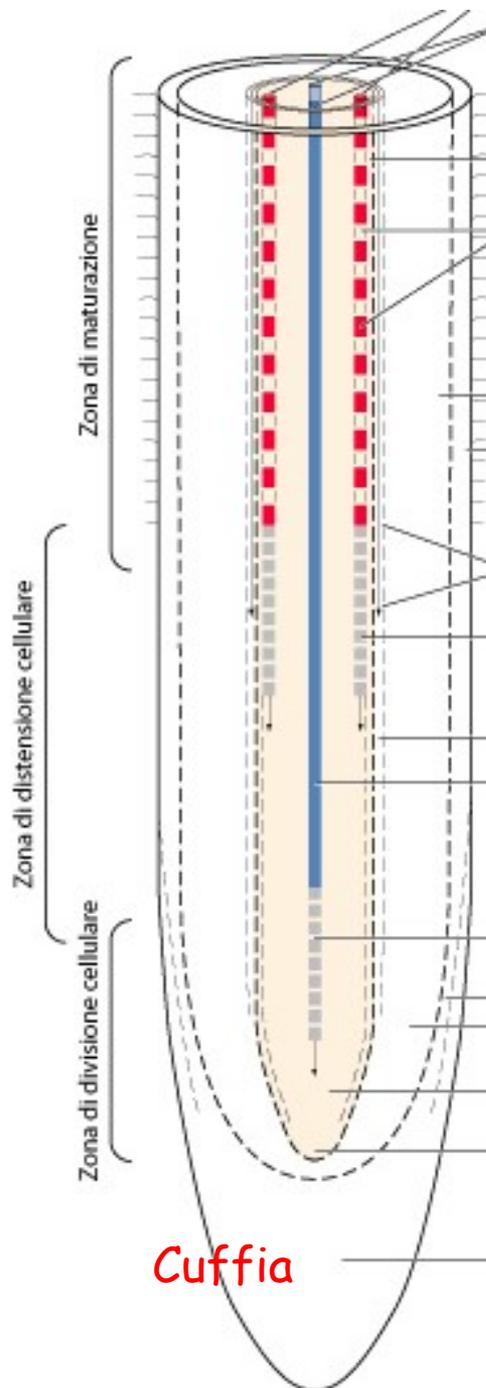


Struttura esterna della radice



CRESCITA RADICE E CUFFIA



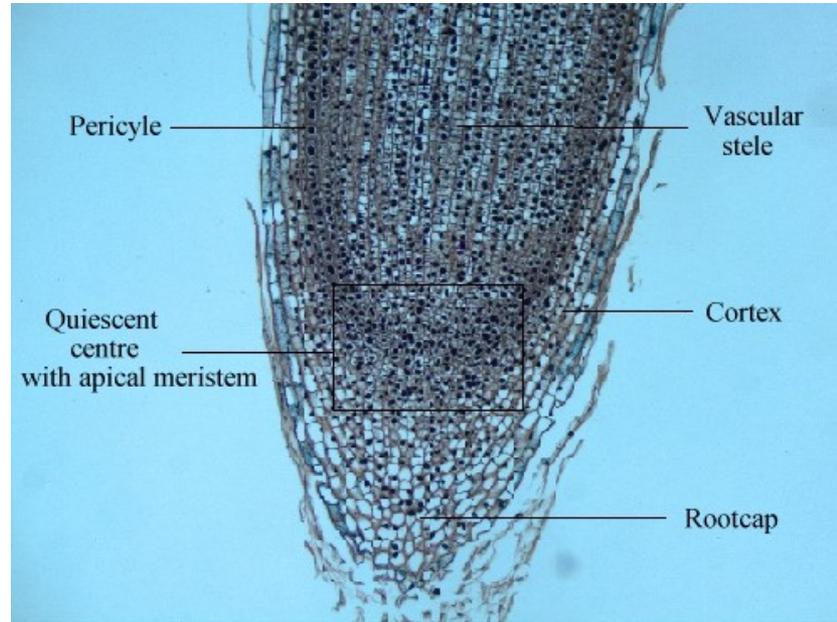
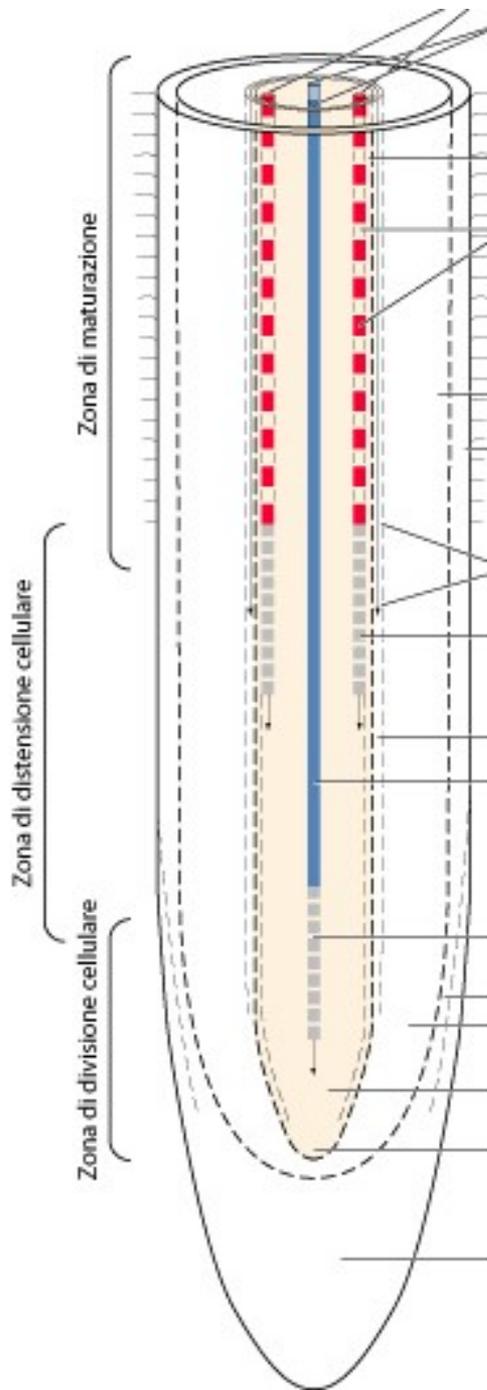
Funzioni cuffia:

- Proteggere l'apice da danni.
- Facilitare la penetrazione della radice nel terreno.
- Gravitropismo.

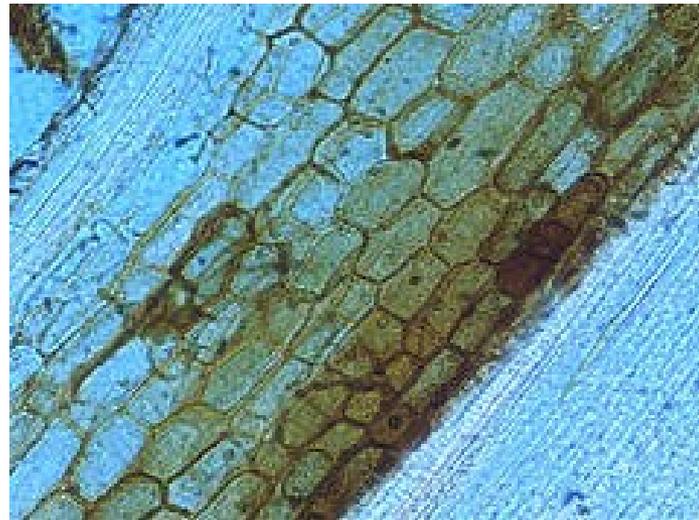
Regolazione della crescita della radice in risposta alla gravità (**Gravitropismo**).



ZONA DI DIVISIONE CELLULARE

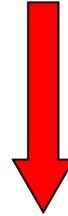


ZONA DI DISTENSIONE CELLULARE

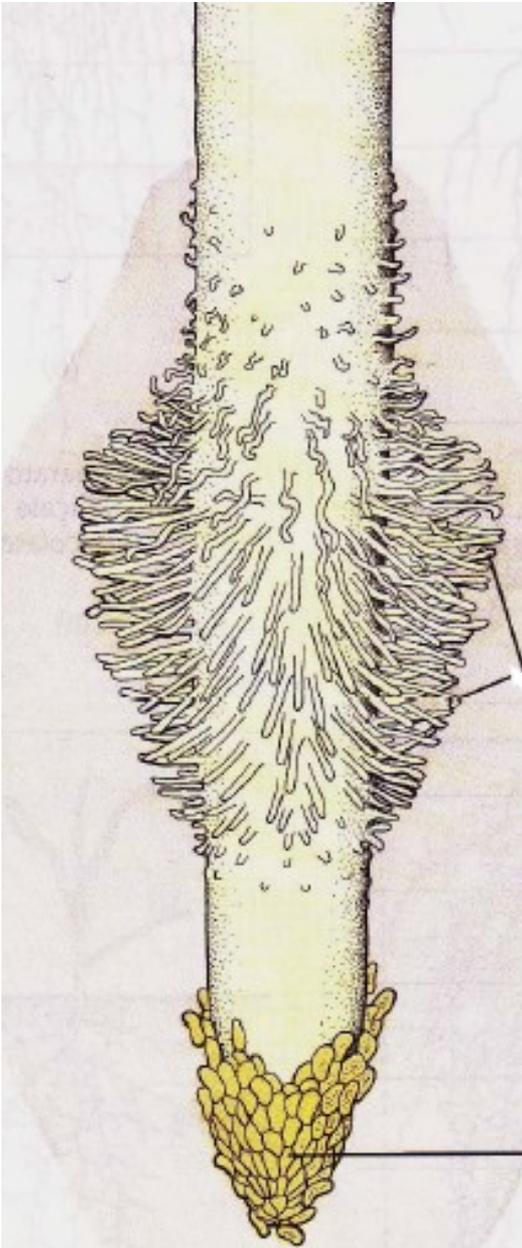
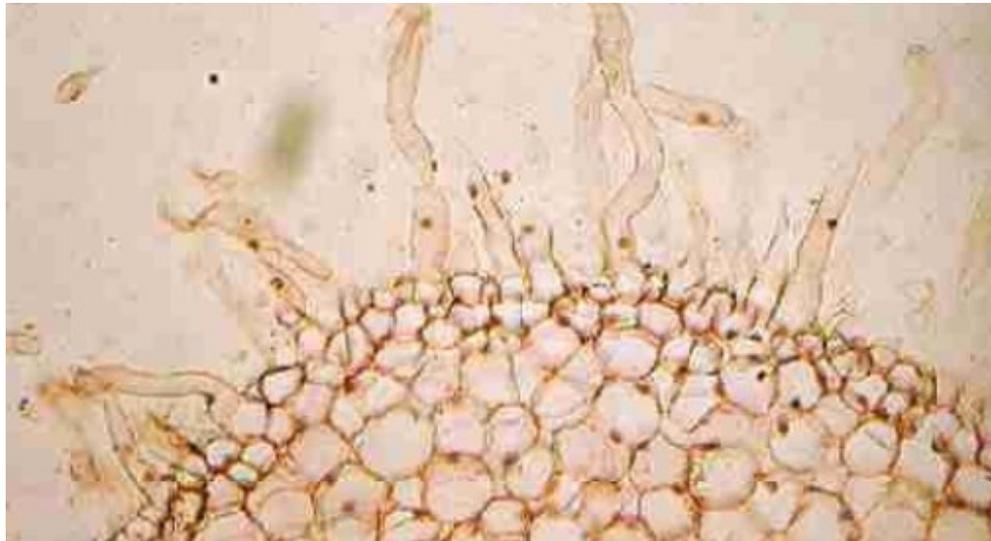


ZONA DI DIFFERENZIAMENTO

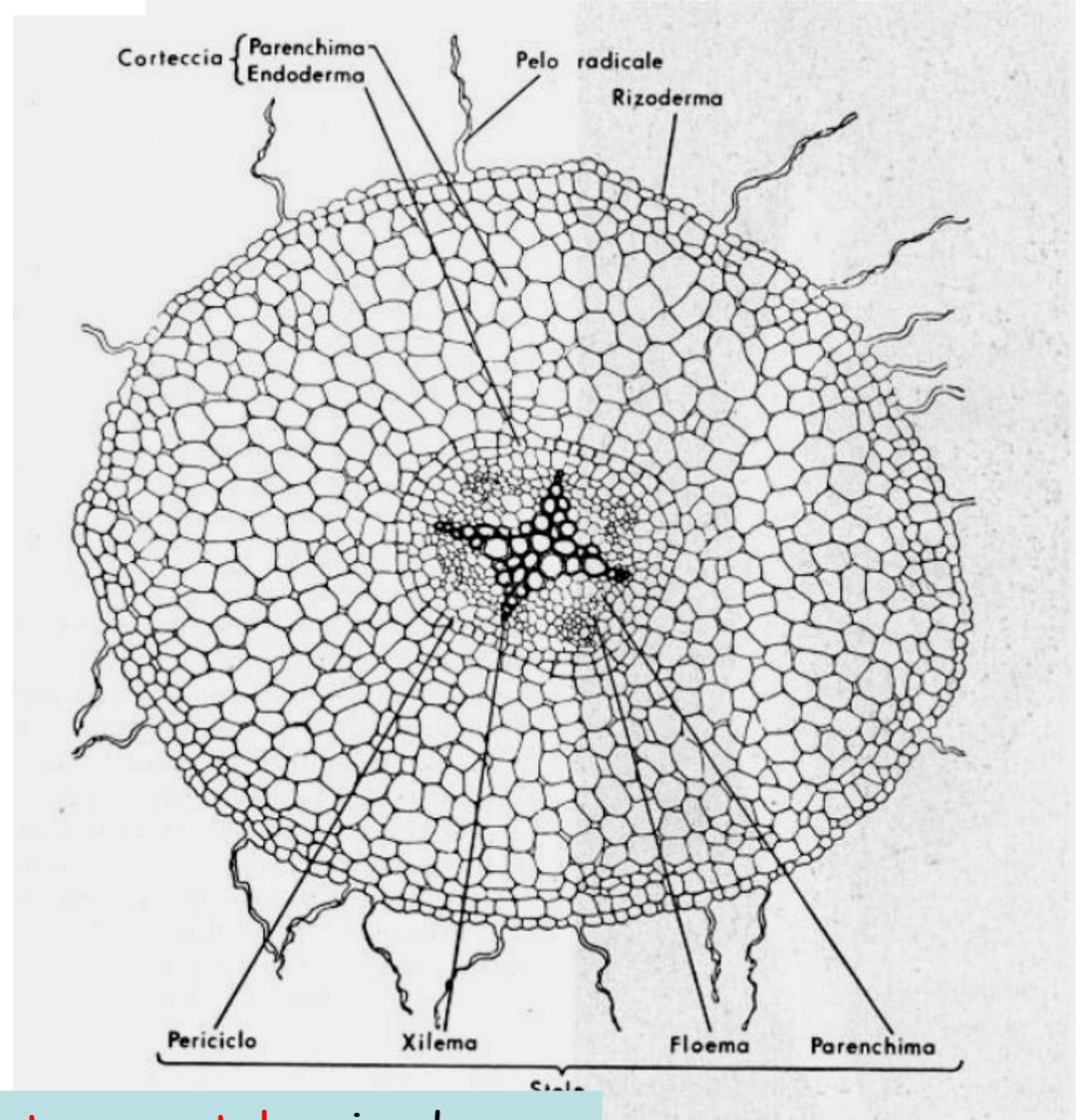
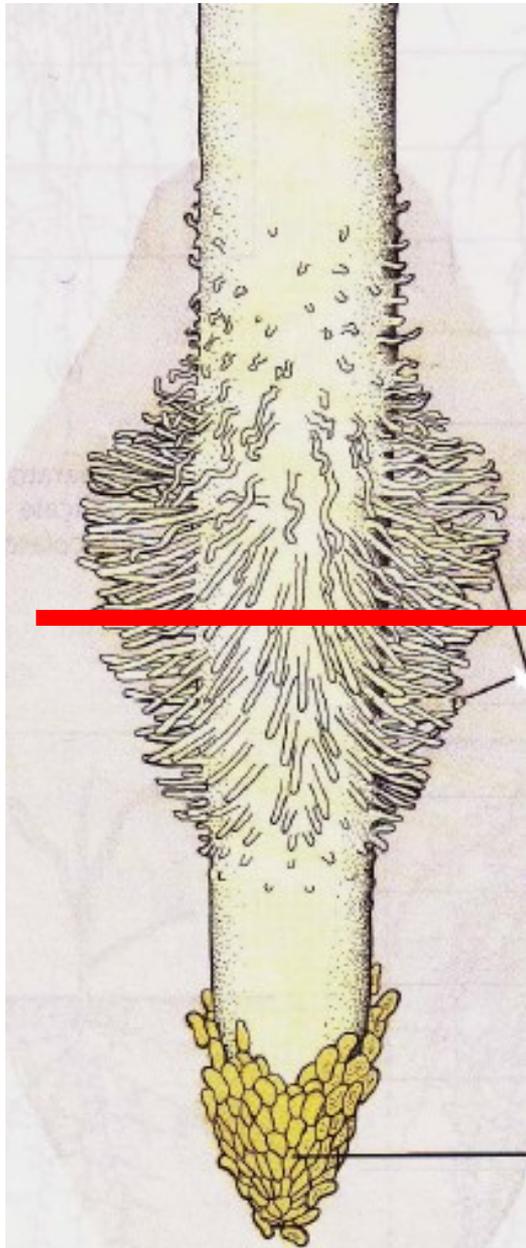
Iniziamo a formarsi i vari tipi cellulari



ZONA DI STRUTTURA PRIMARIA



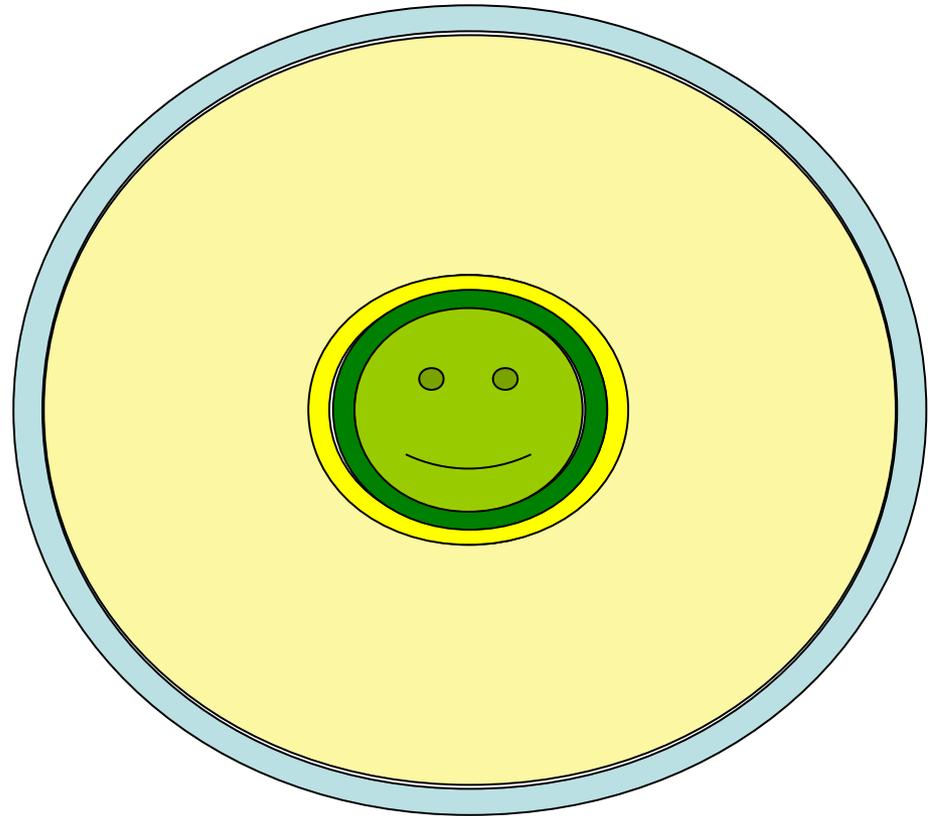
ZONA DI STRUTTURA PRIMARIA



Cilindro tegumentale: rizoderma

Cilindro corticale: parenchima di riserva + endoderma

Cilindro centrale: periciclo + tessuti conduttori + midollo



Cilindro tegumentale: rizoderma

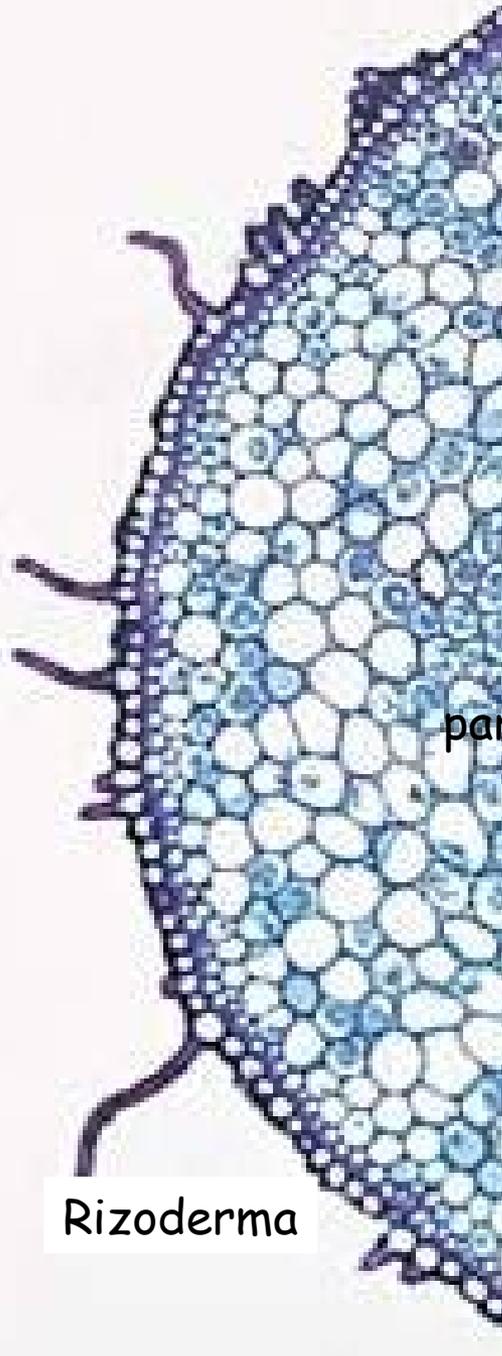
Cilindro corticale: parenchima di riserva + endoderma

Cilindro centrale: periciclo + tessuti conduttori + midollo

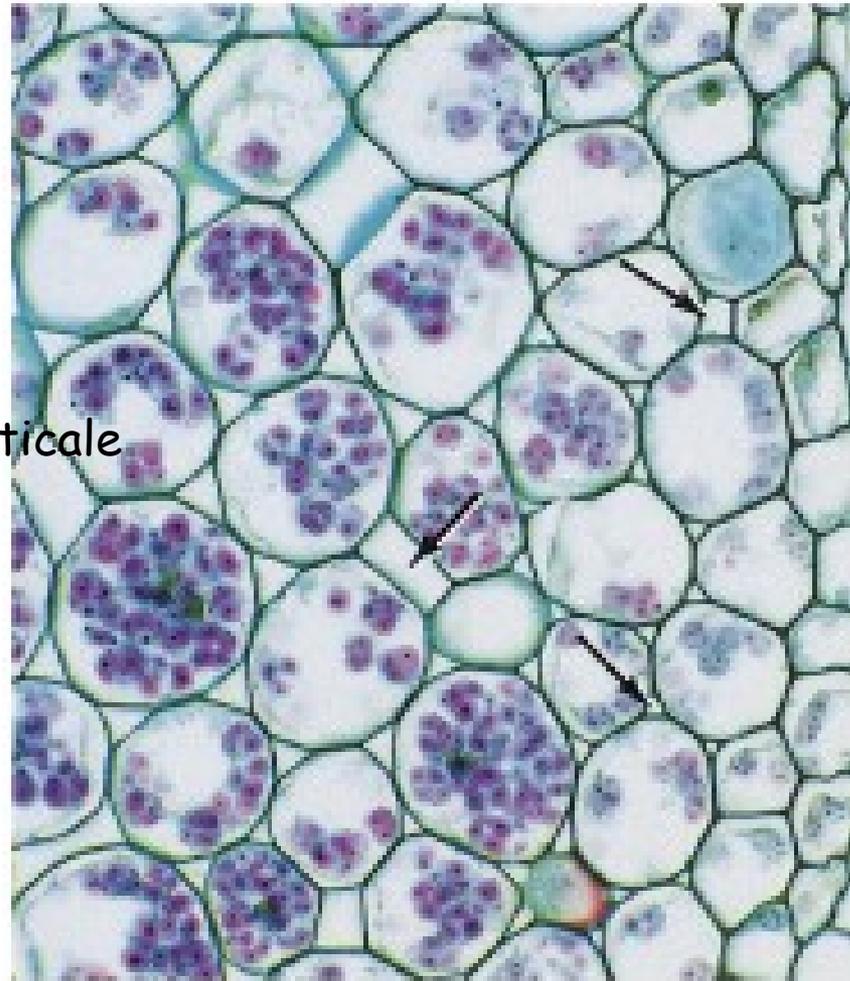
Rizoderma

+

Parenchima corticale



parenchima corticale

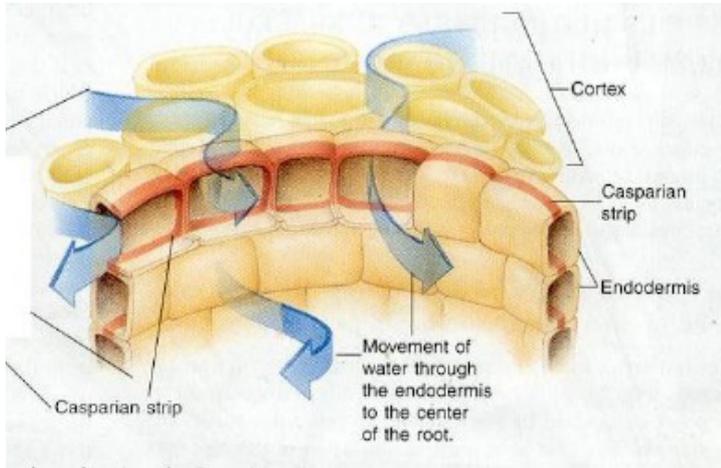
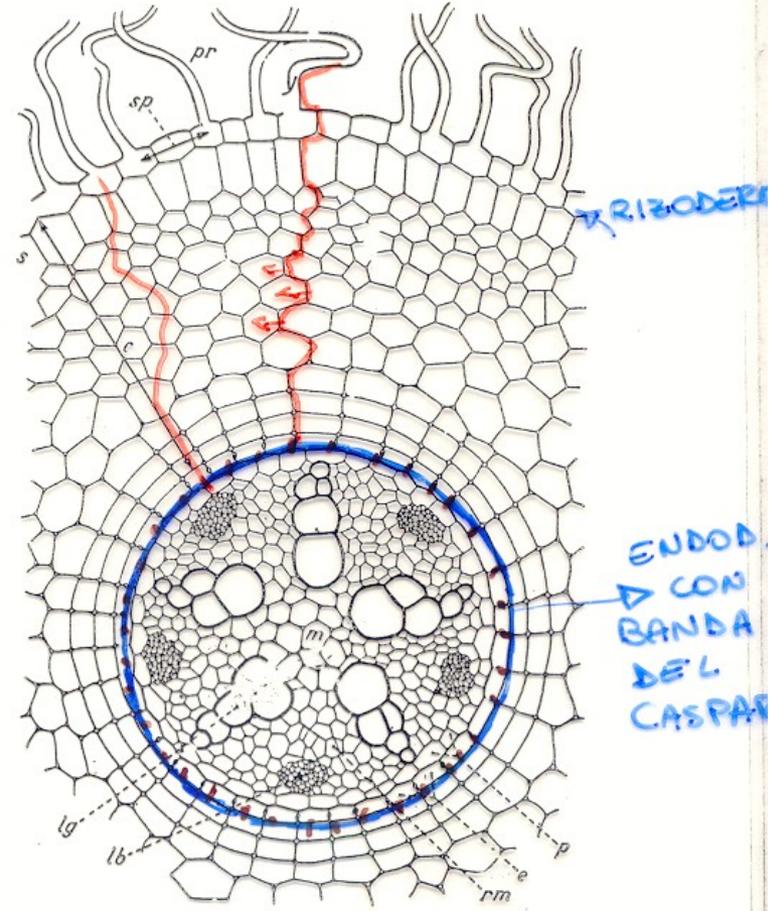
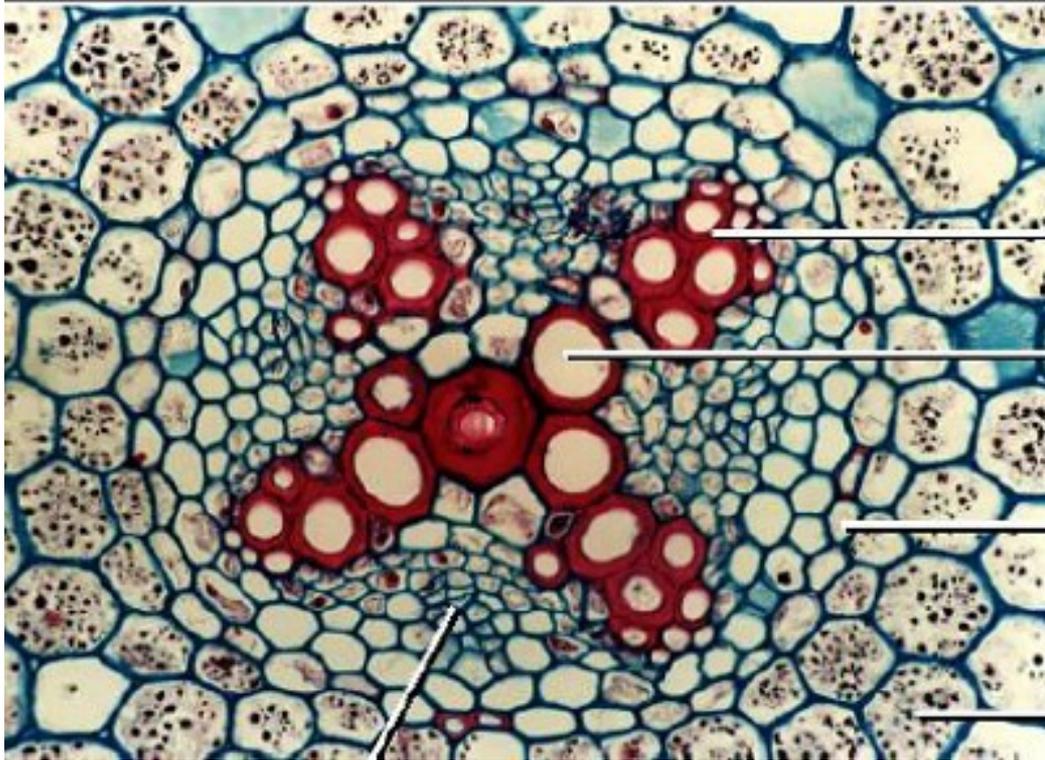


Rizoderma

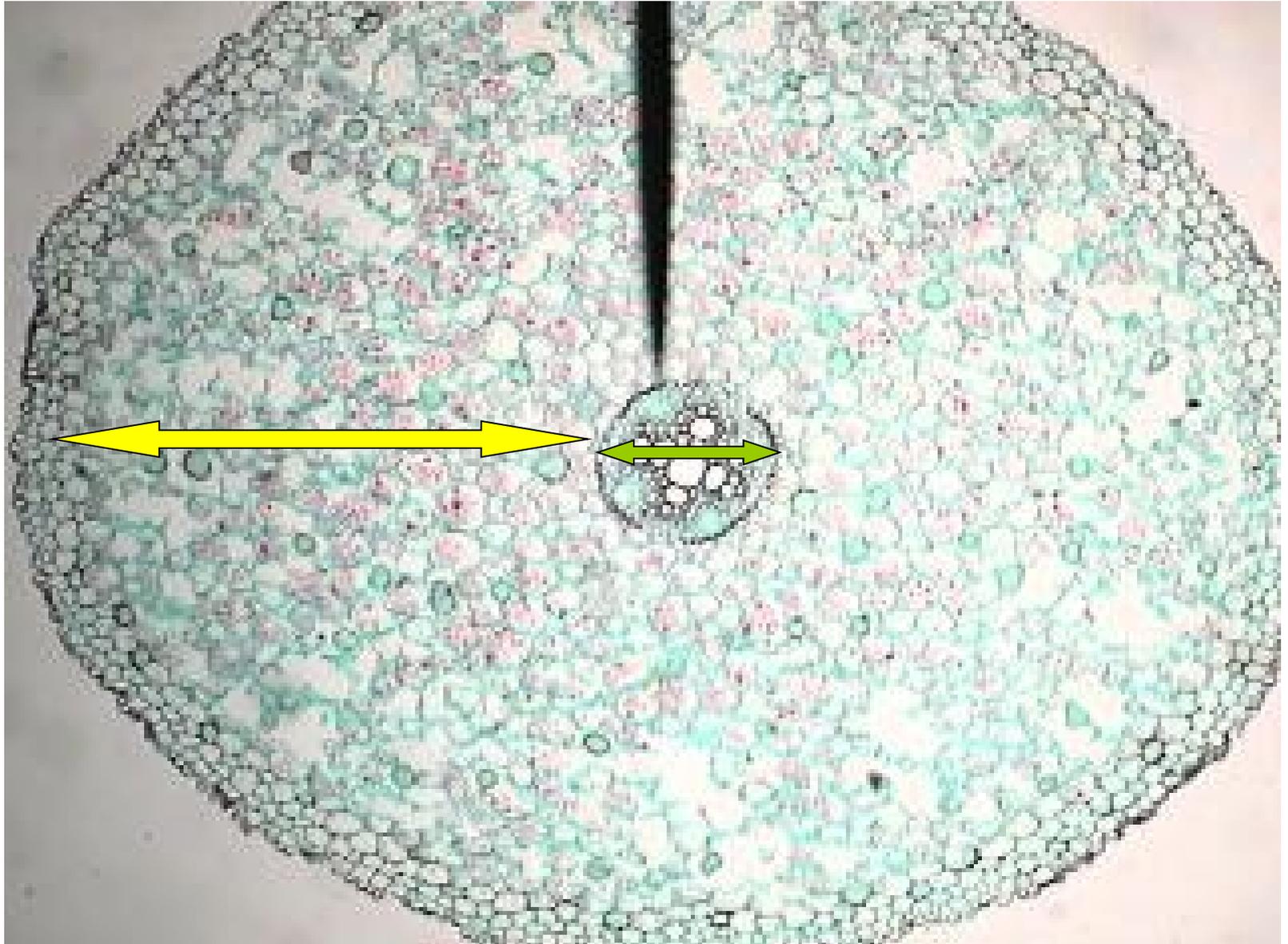
Endoderma



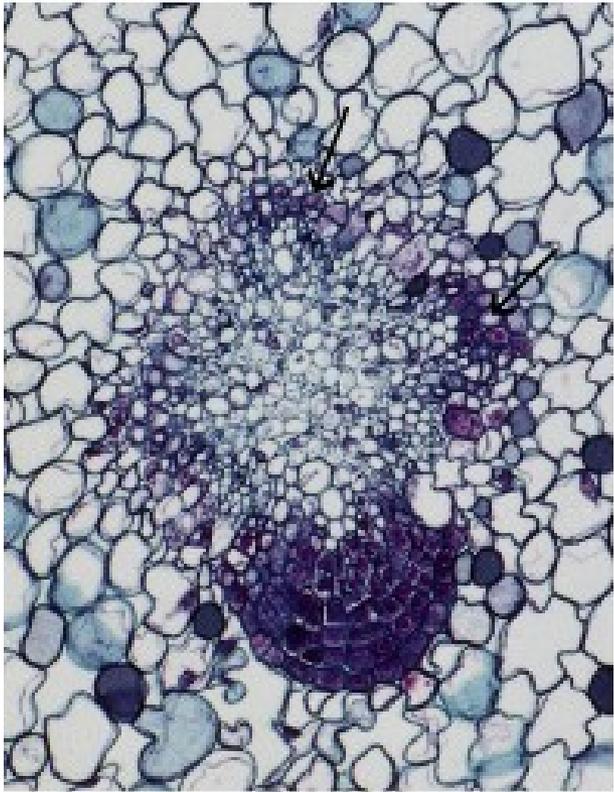
delimita il cilindro corticale dal cilindro centrale



Cilindro centrale: periciclo + tessuti conduttori + midollo

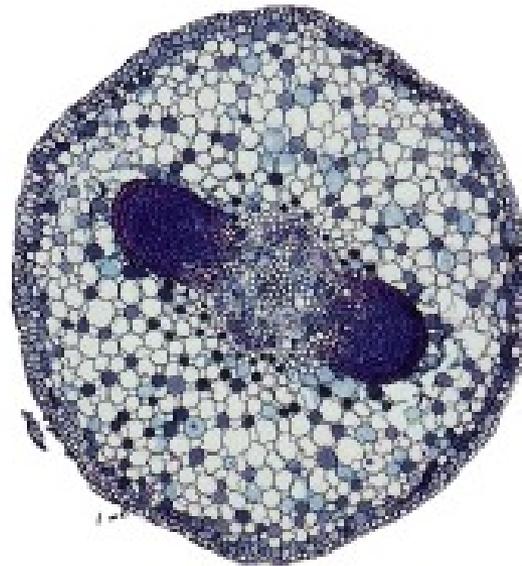


Dal Periciclo: sviluppo di radici laterali



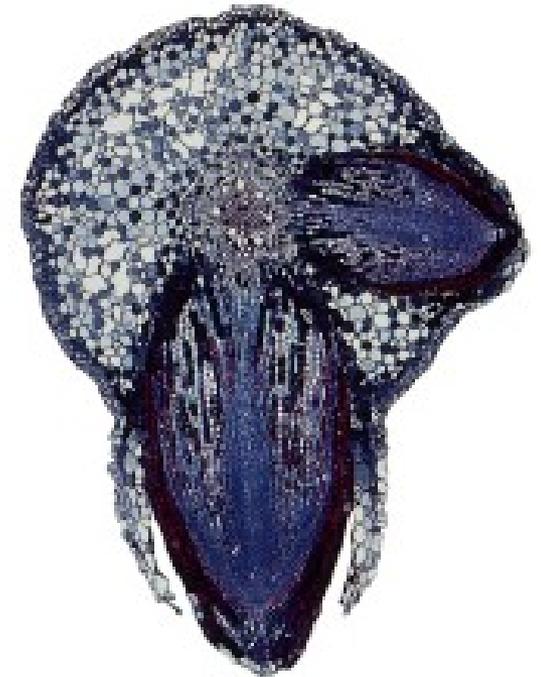
(a)

50 μm



(b)

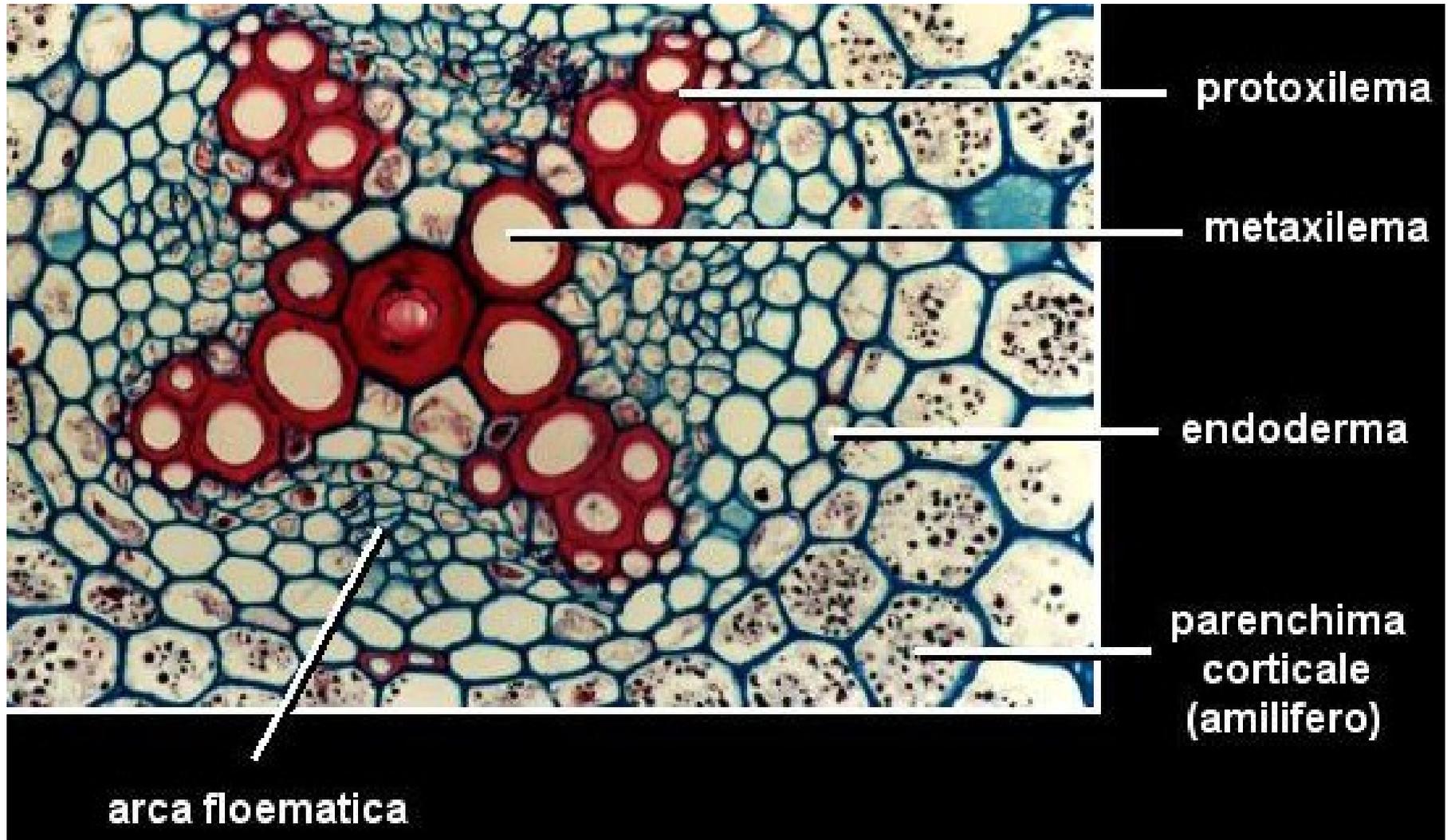
200 μm



(c)

250 μm

Fascio radiale ; **ACTINOSTELE**



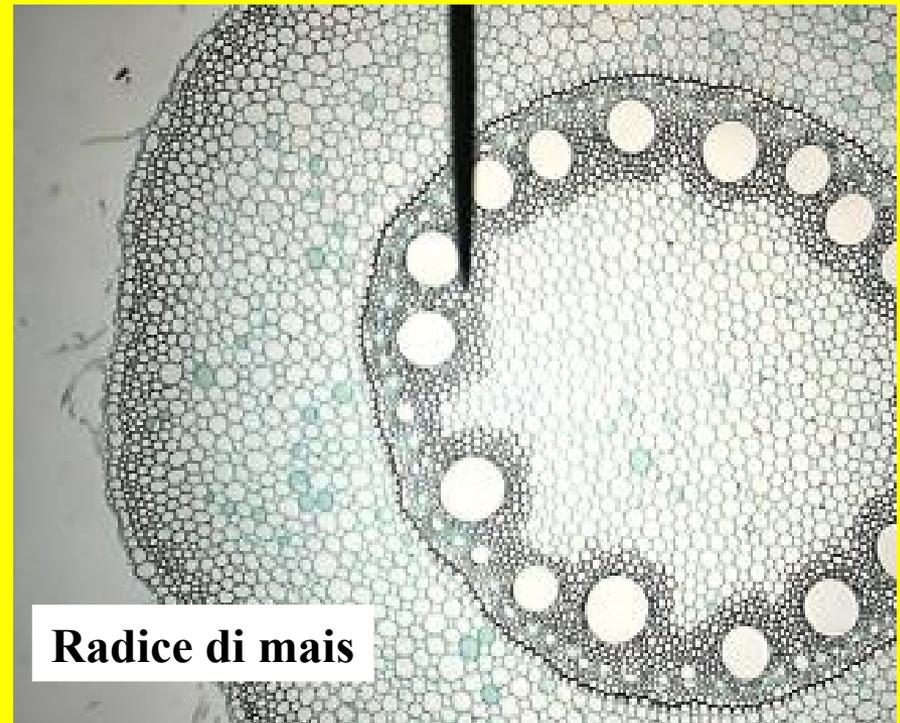
2 tipi di ACTINOSTELE:

In Gimnosperme e Dicotiledoni manca il midollo + poche arche legnose (2-6) saldate fra loro al centro.



Radice di ranuncolo

Nelle Monocotiledoni: numero consistente di arche + midollo



Radice di mais