

ANATOMSKA GRAĐA BILJNOG TIJELA

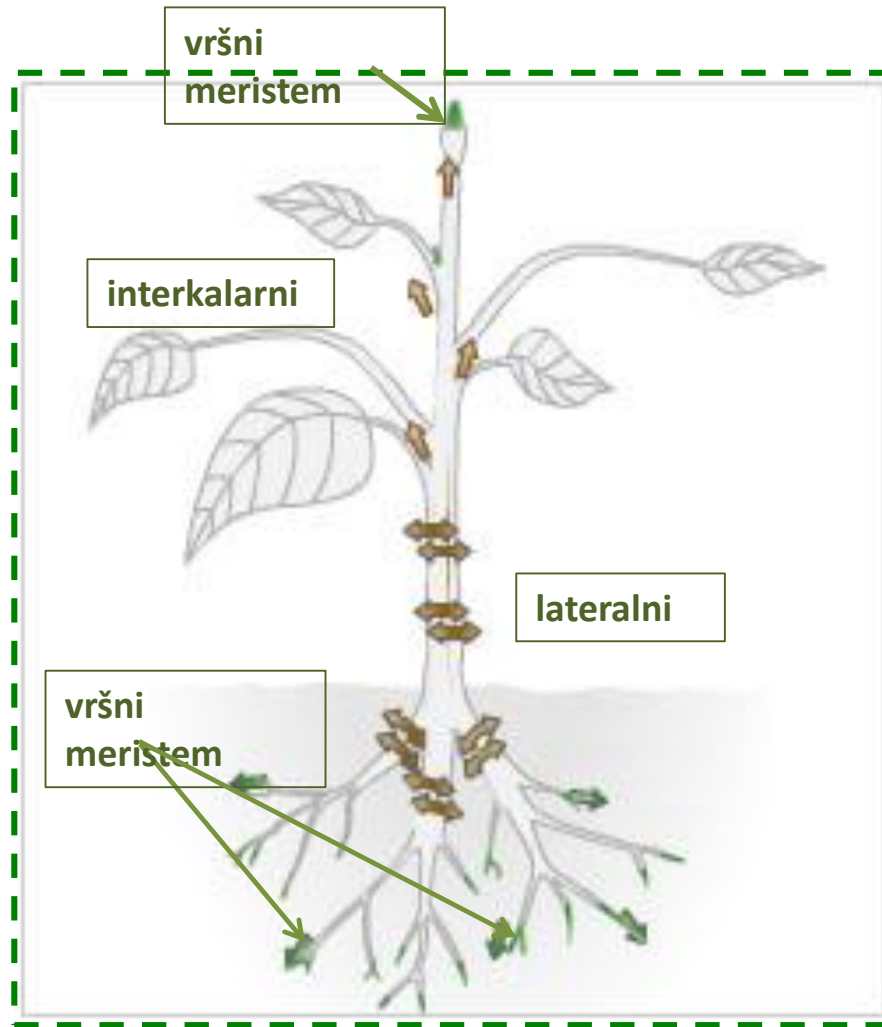
Primarna građa

Sekundarna građa

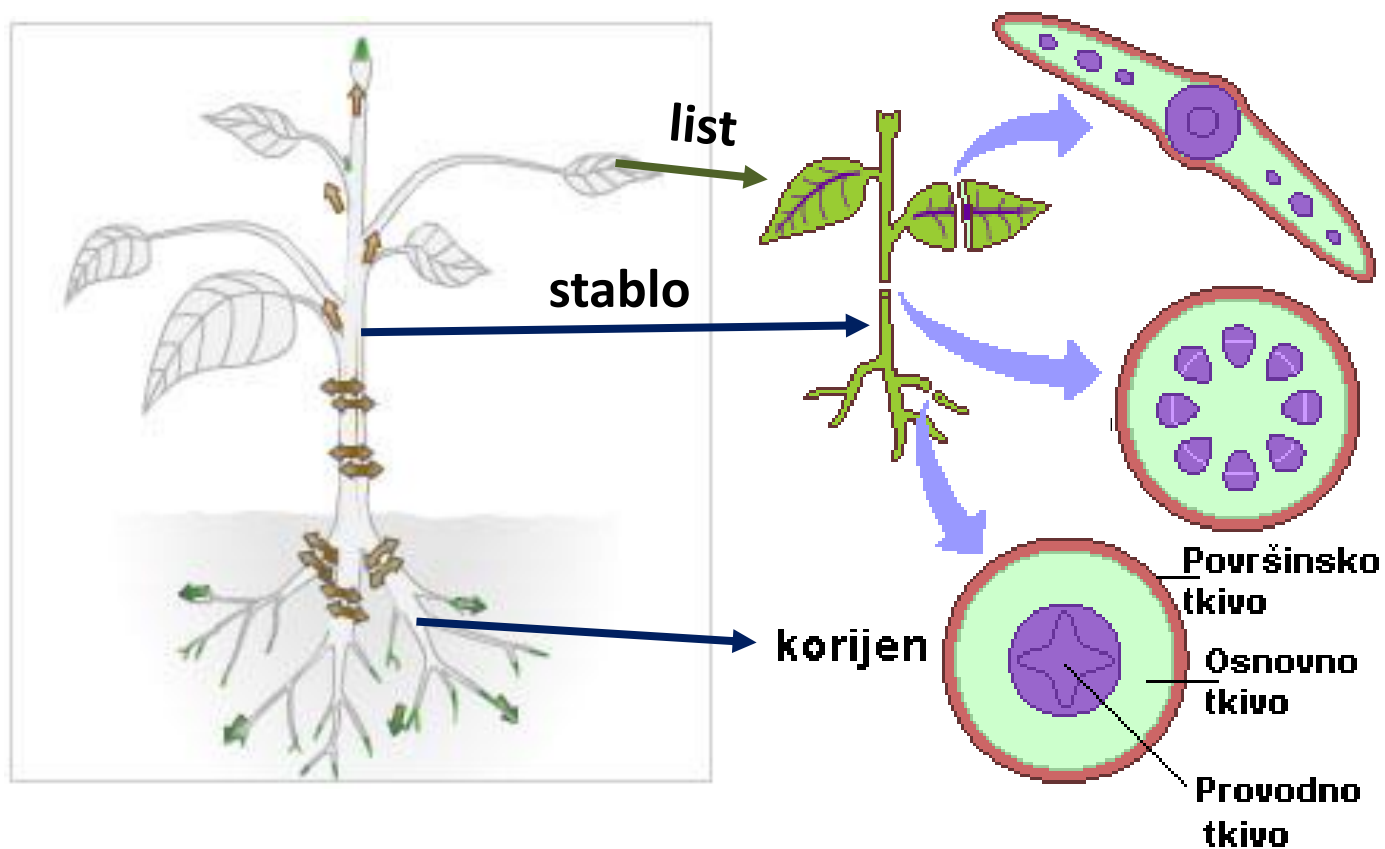
Primarni meristemi stvaraju primarna trajna tkiva.

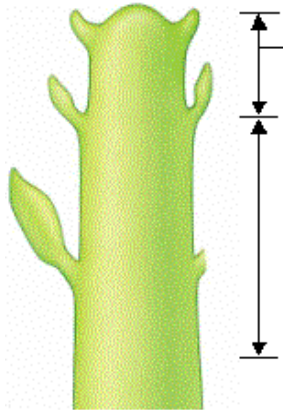
Neke ćelije primarnih trajnih tkiva stiču sposobnost dediferencijacije i diobe i sami postaju sekundarna meristemska tkiva.

Sekundarni meristemi stvaraju sekundarna trajna tkiva.



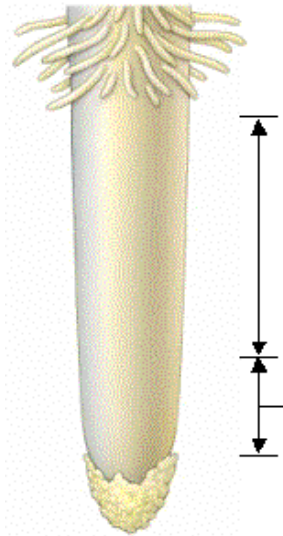
Osnovni principi primarne građe biljnog tijela





Vršni meristem stabla (zona intenzivne diobe)

**Zona izduživanja i diferencijacije primarnih tkiva stabla
(epidermis, primarna kora, centralni = provodni cilindar)**



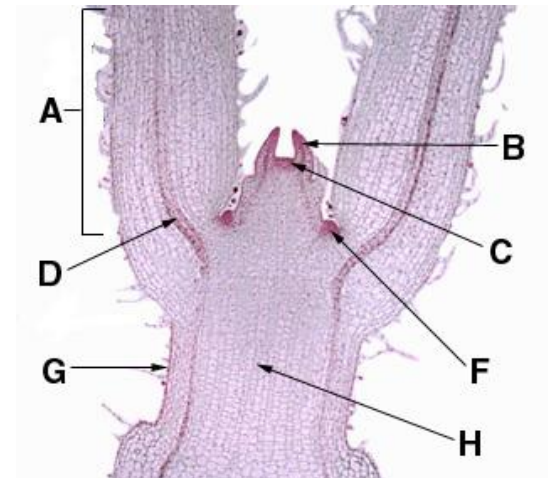
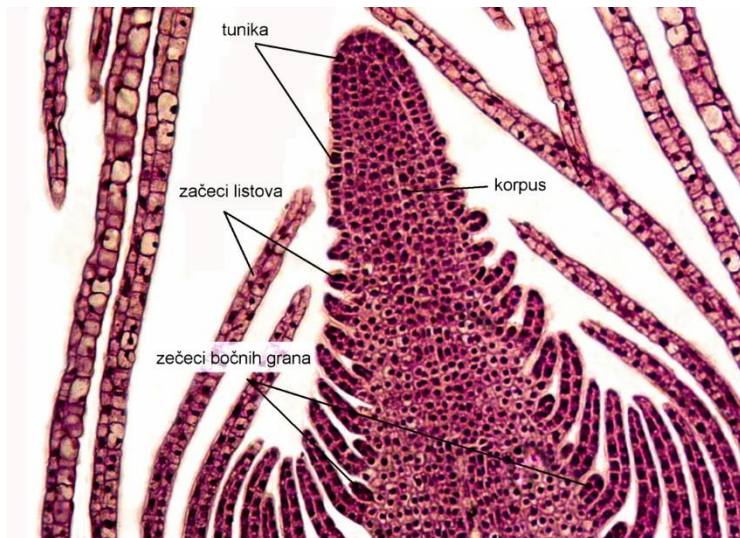
**Zona izduživanja i diferencijacije primarnih tkiva korijena
(rizodermis, primarna kora, centralni = provodni cilindar)**

Vršni meristem korijena (zona intenzivne diobe)

U vegetativnoj kupi stabla se nalaze vršni meristemi: **tunika** i **korpus**, odnosno **protoderm** i **osnovni meristem** i lateralni meristem **prokambijum**. Od njih nastaju trajna tkiva: epidermis (od protoderma), mehanička i parenhimska tkiva od osnovnog meristema i provodna tkiva (floem i ksilem) od prokambijuma.

Vegetativna kupa stabla

Tunika, korpus, osnovni meristem,
protoderm, prokambijum

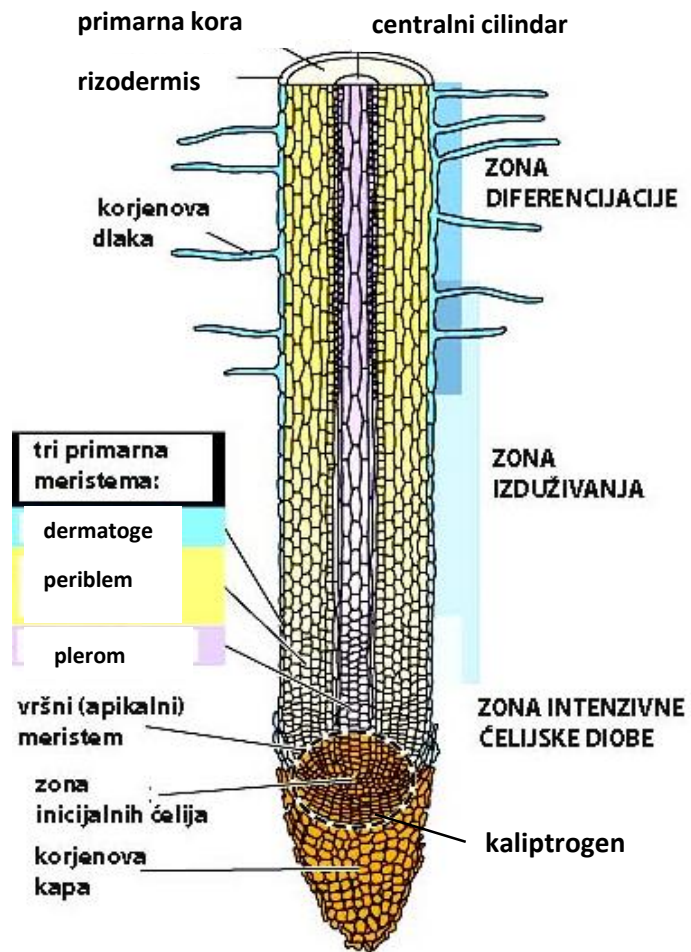
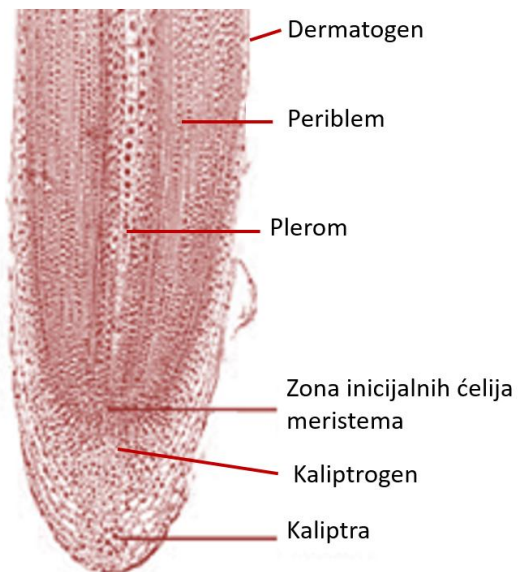


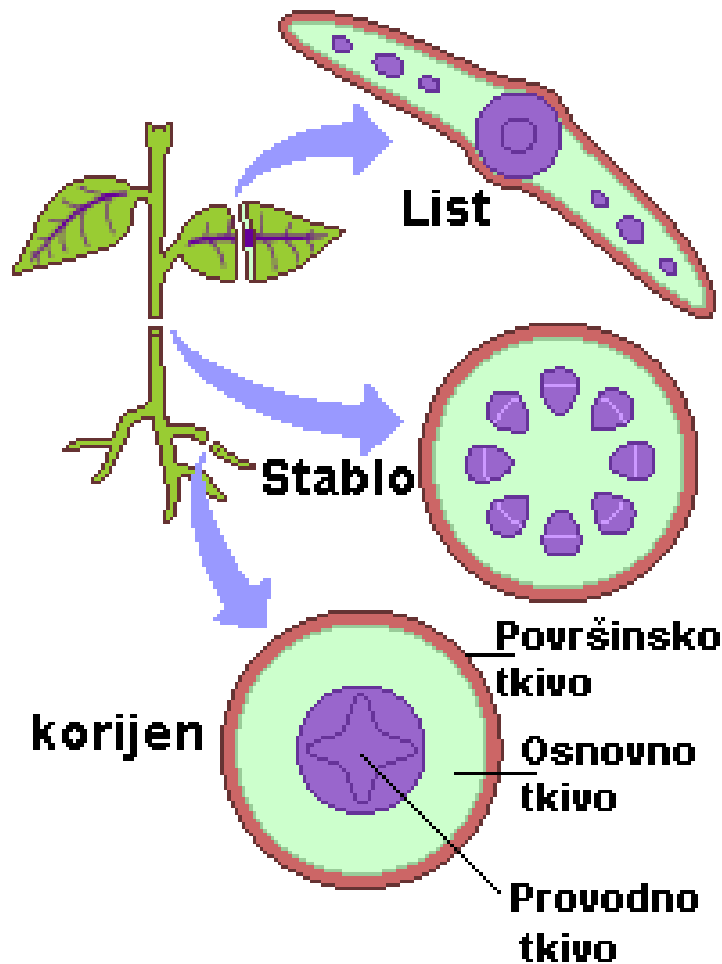
A i B- lisne primordije (starije i mlađe)
C- vršni meristem
D- prokambijum
F- bočni pupoljak
G- epidermis
H- osnovni meristem

Vršni meristemi u vegetativnoj kupi korijena su:

kaliptrogen, dermatogen, periblem i plerom.

Diferencijacijom njihovih ćelija nastaju: korjenova kapa (od kaliptrogena), rizodermis (od dermatogena), elementi primarne kore (od periblema) i centralnog cilindra (od pleroma).





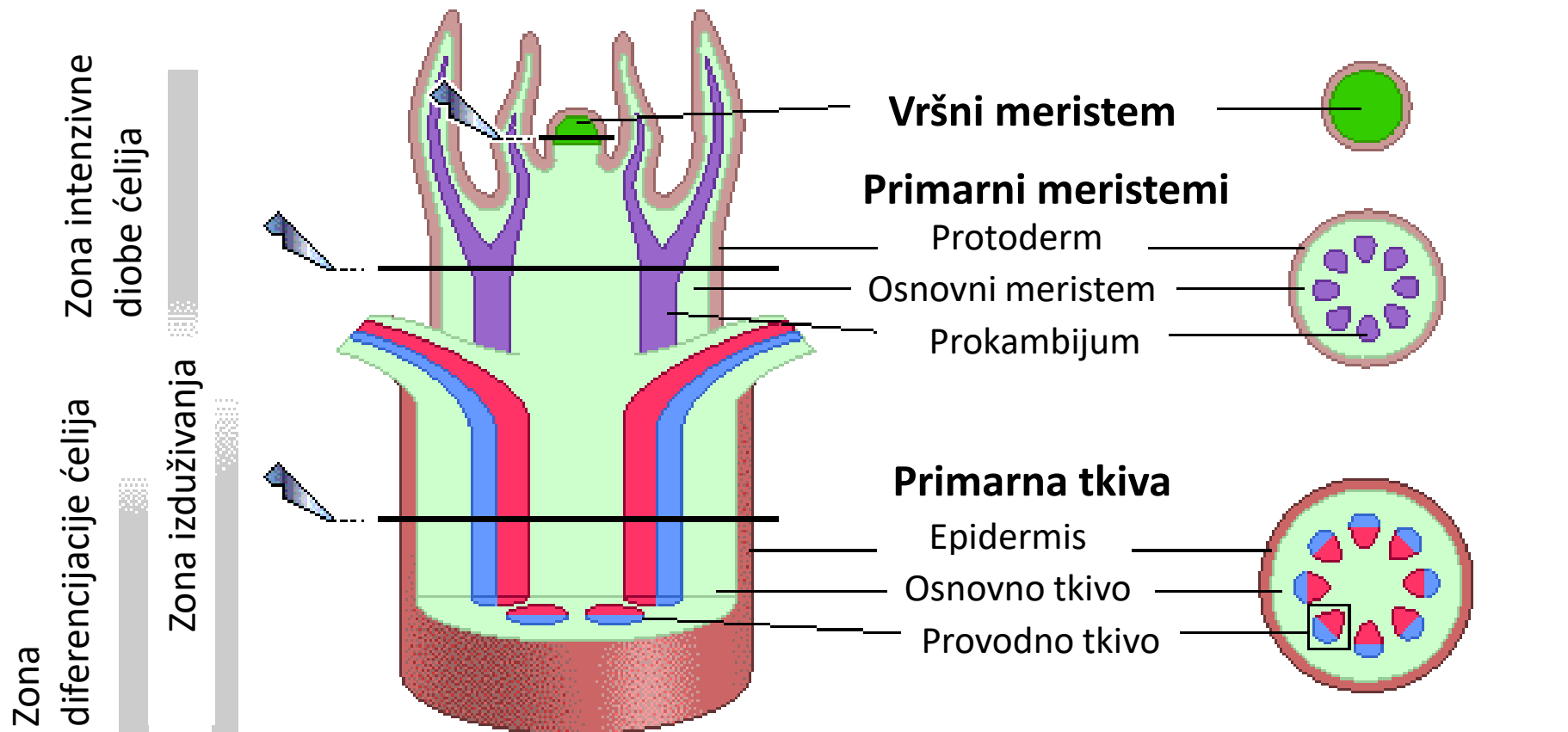
Površinsko tkivo
izdanka nastaje od
protoderma, a
apsorpciona zona
korijena od
dermatogena!

Osnovno tkivo
(parenhimsko +
mehaničko) od
osnovnog
meristema.

Provodna tkiva od
prokambijuma.

Zahvaljujući apikalnim (vršnim) i interkalarnim (umetnutim) meristemima biljno tijelo se izdužuje, dok aktivnošću bočnih, ono deblja.

Primarna građa stabla- opšta shema!

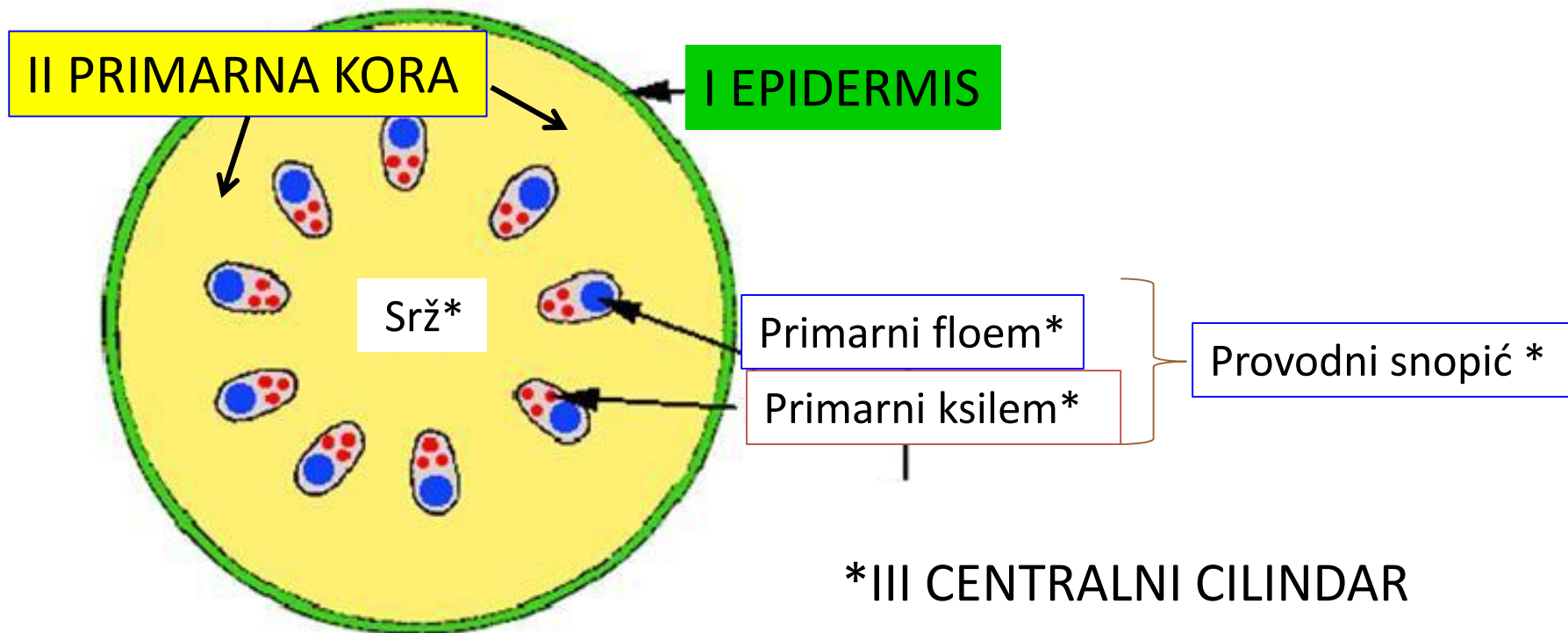


Osnovno tkivo= parenhim + mehanički elementi

Primarna građa stabla dikotiledonih biljaka

Opšta primarna građa:

Epidermis, primarna kora, centralni cilindar



Elementi primarne kore

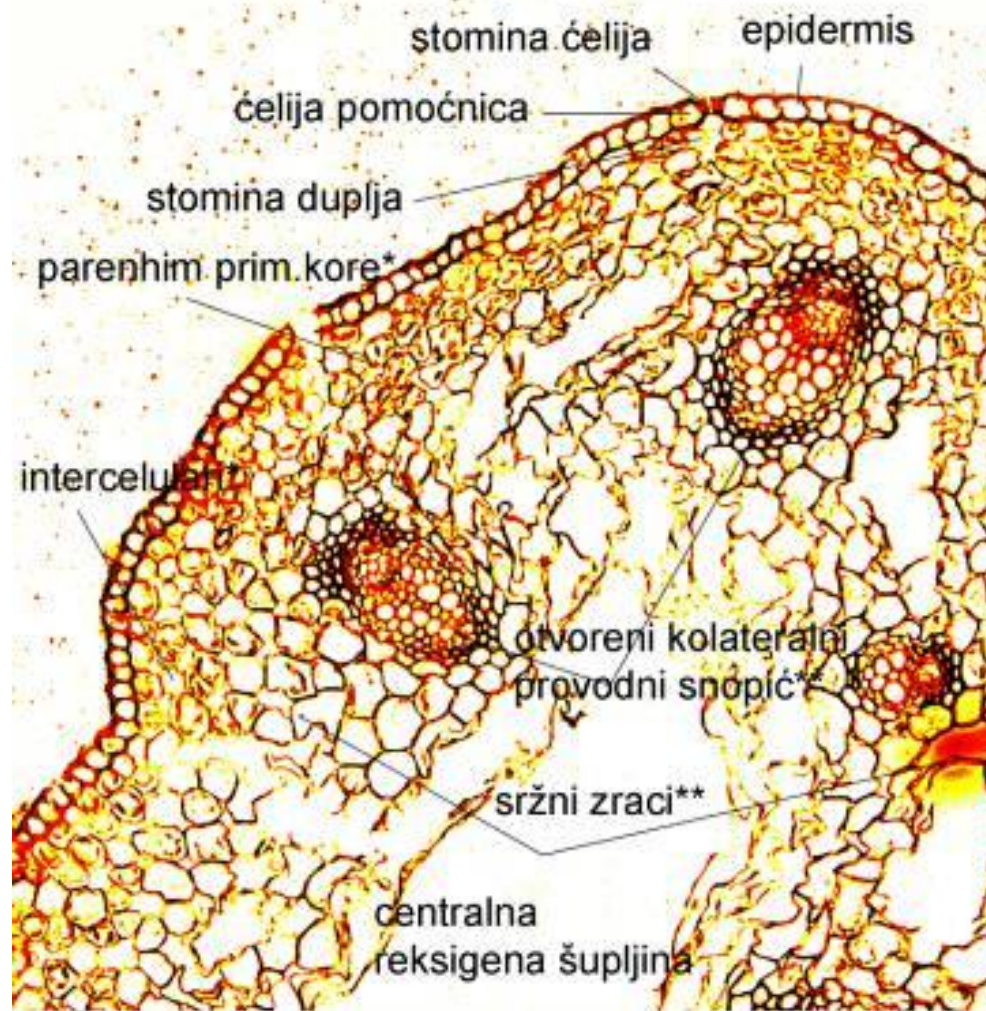
- Parenhimske ćelije
- Mehaničke ćelije
- Endodermis=
skrobna sara

Elementi centralnog cilindra

- Pericikl
- Provodni snopići
ili provodni
cilindar
- Srž

- **Pericikl:**

- a) Parenhimske ćelije
- b) Prsten od sklerenhimskog i parenhimskog tkiva
- c) Trake sklerenhima i parenhima koje se naizmjenično smjenjuju



I- EPIDERMIS

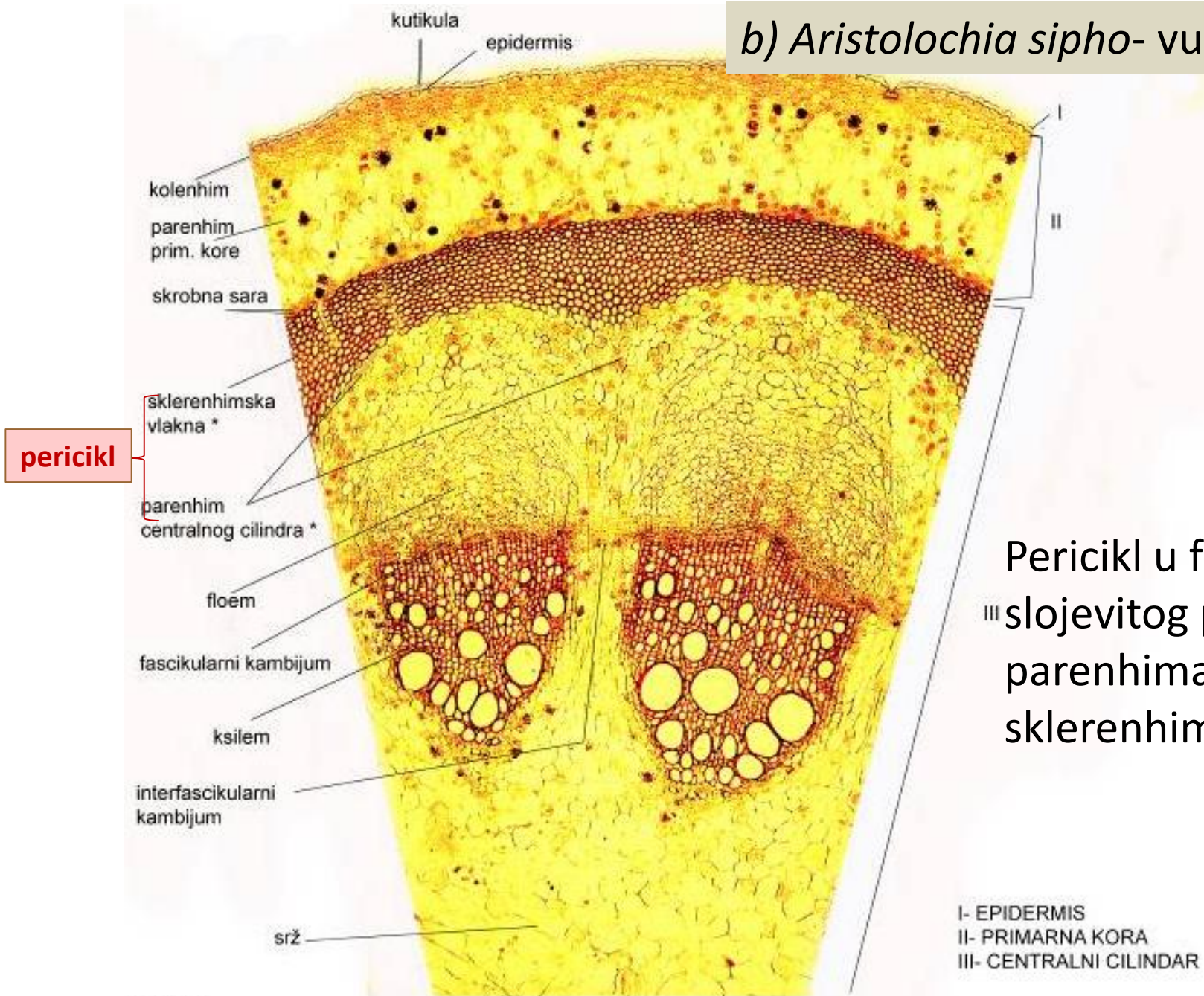
*- PRIMARNA KORA

** - CENTRALNI CILINDAR

a) *Ranunculus* sp.- ljutić

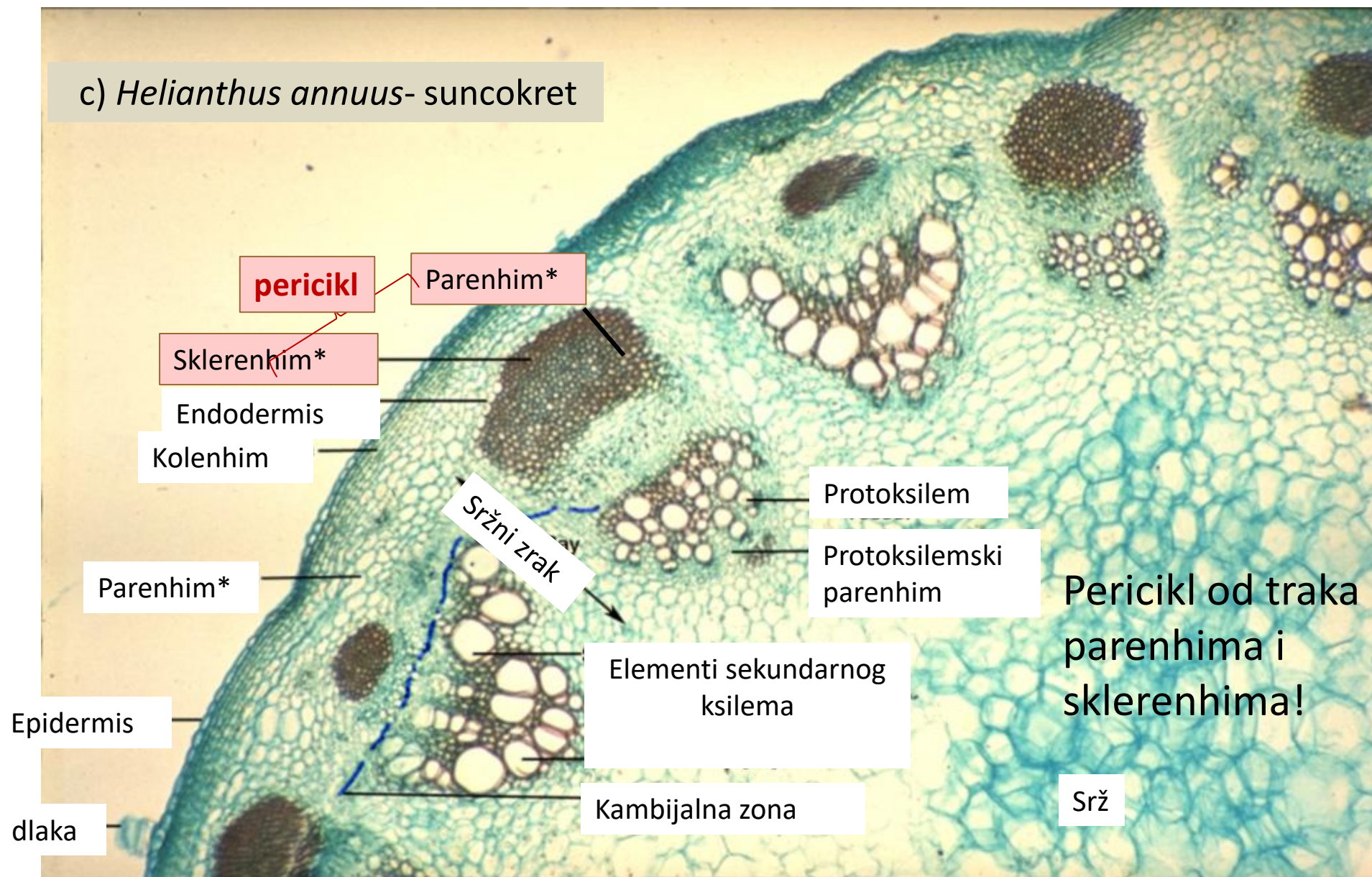
Parenhimatični pericikl!

b) *Aristolochia sipho*- vučja jabuka

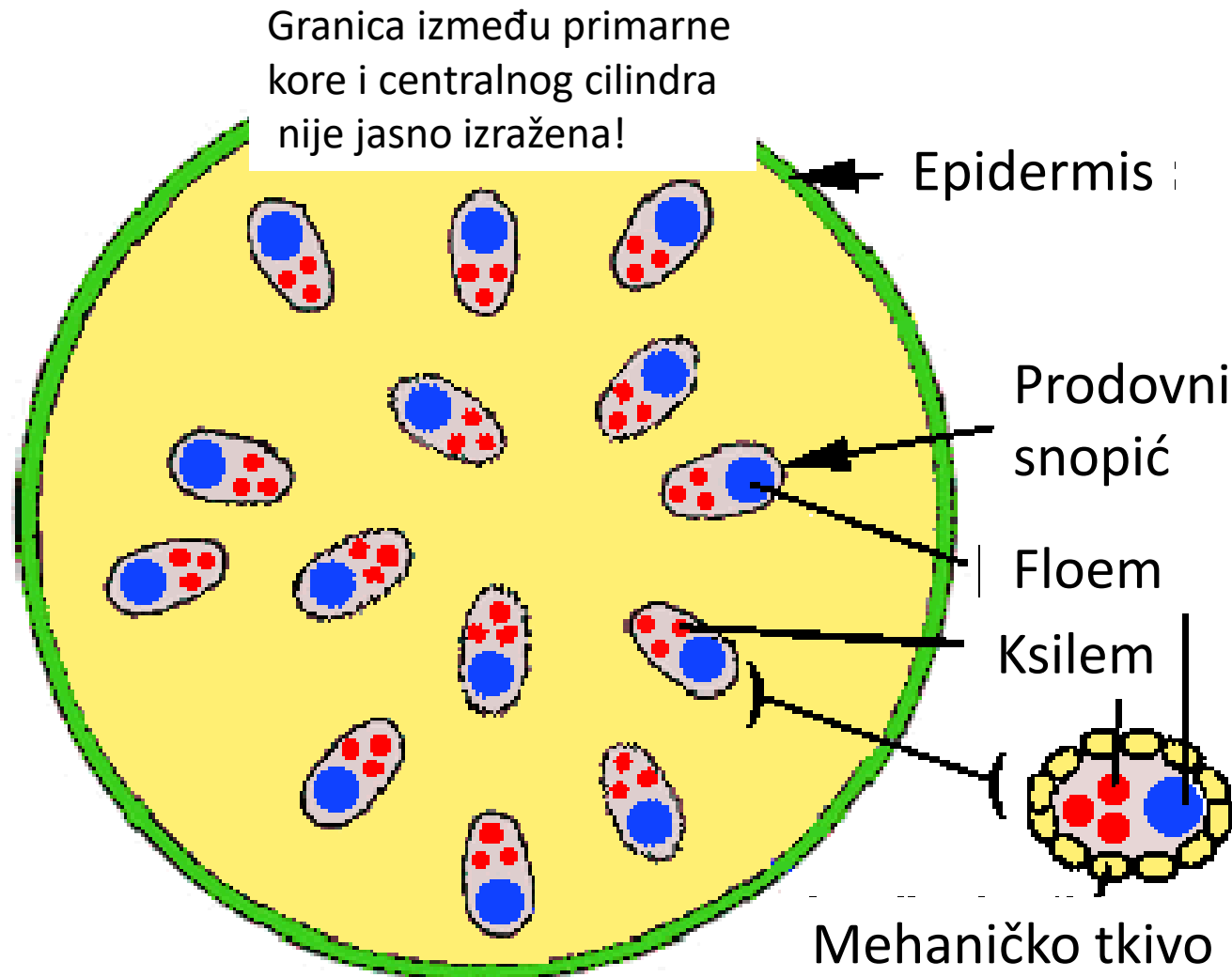


Pericikl u formi
III slojevitog prstena od
parenhima i
sklerenhima!

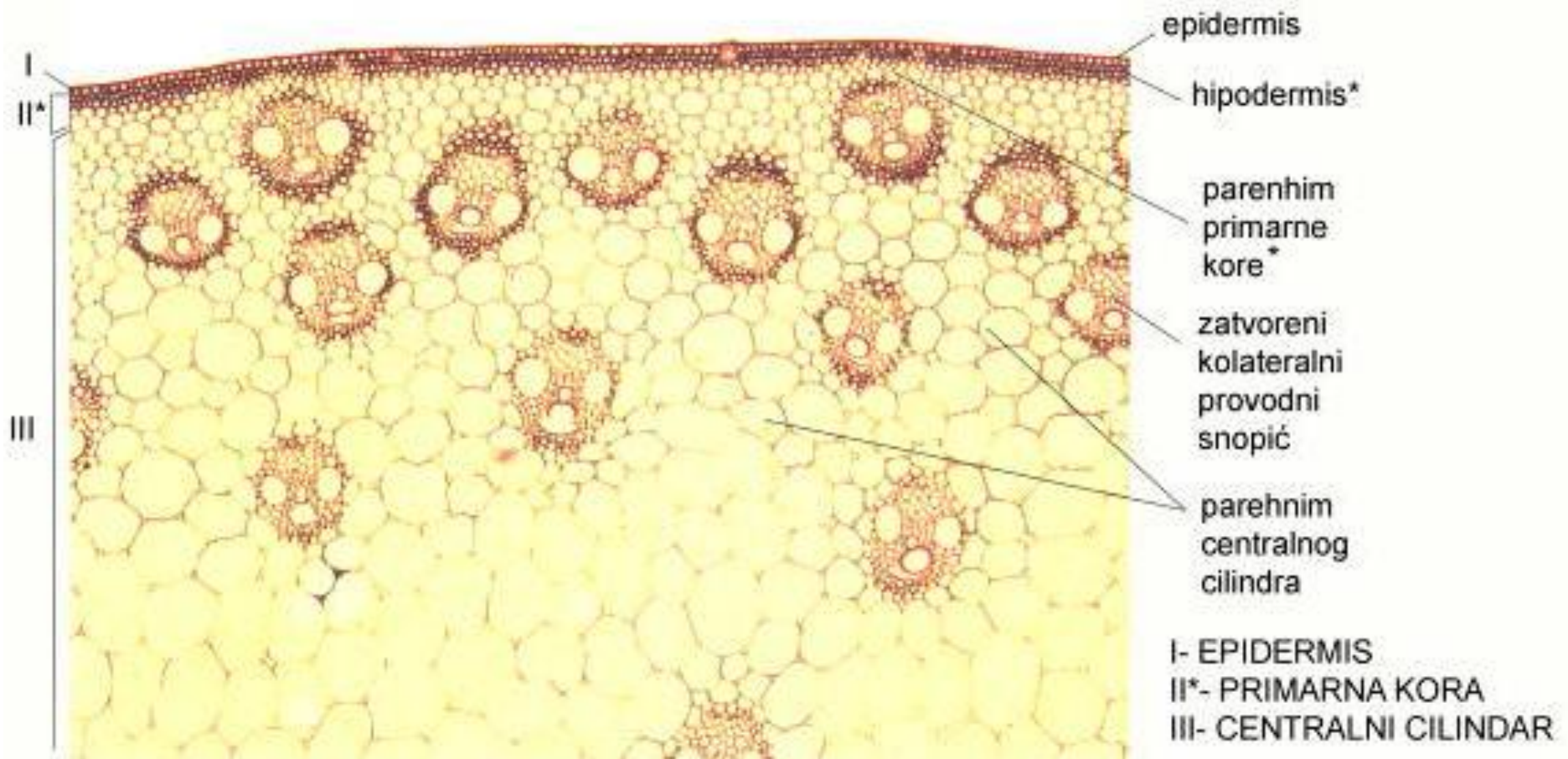
c) *Helianthus annuus*- suncokret



Primarna građa stabla monokotiledonih biljaka

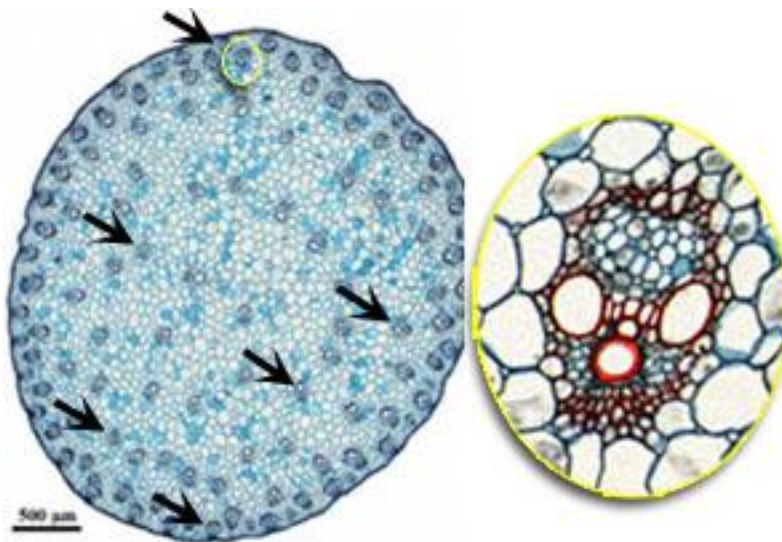


Zea mays – kukuruz



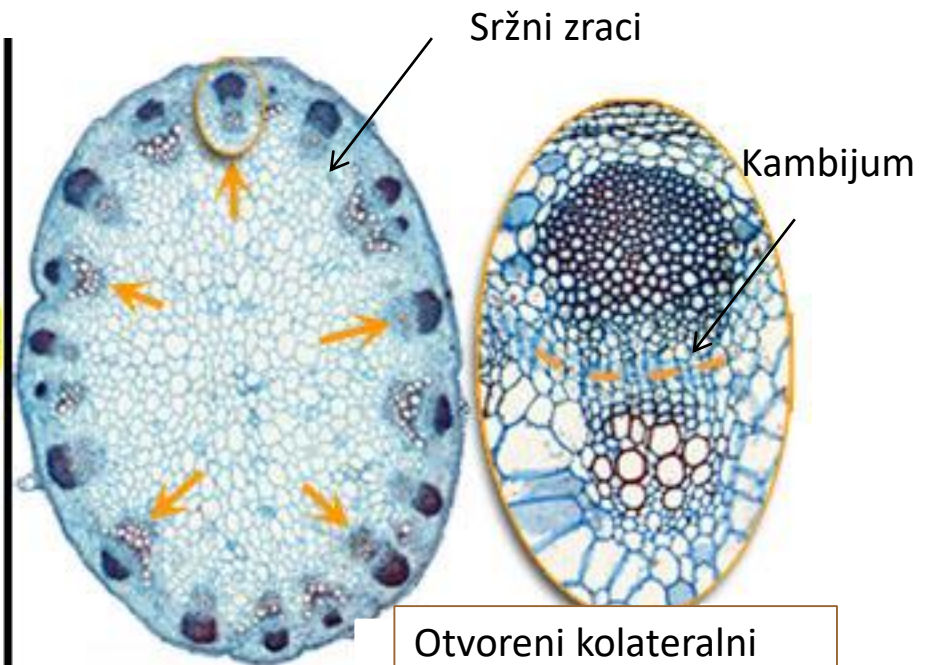
Uporedna shema primarne građe stabla mono- i dikotiledonih biljaka

PRIMARNO STABLO MONOKOTILA



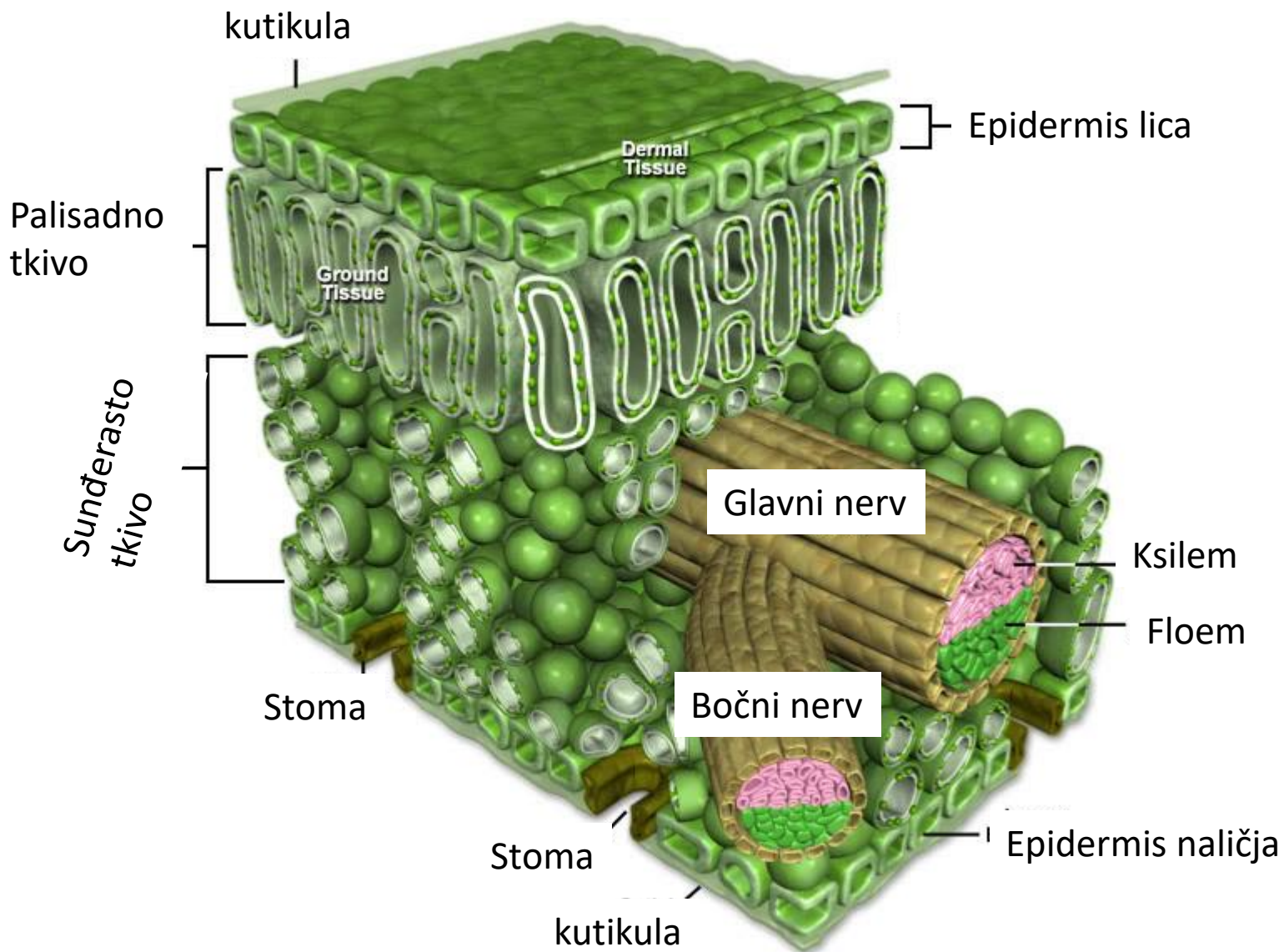
Zatvoreni kolateralni
provodni snopić

PRIMARNO STABLO DIKOTILA

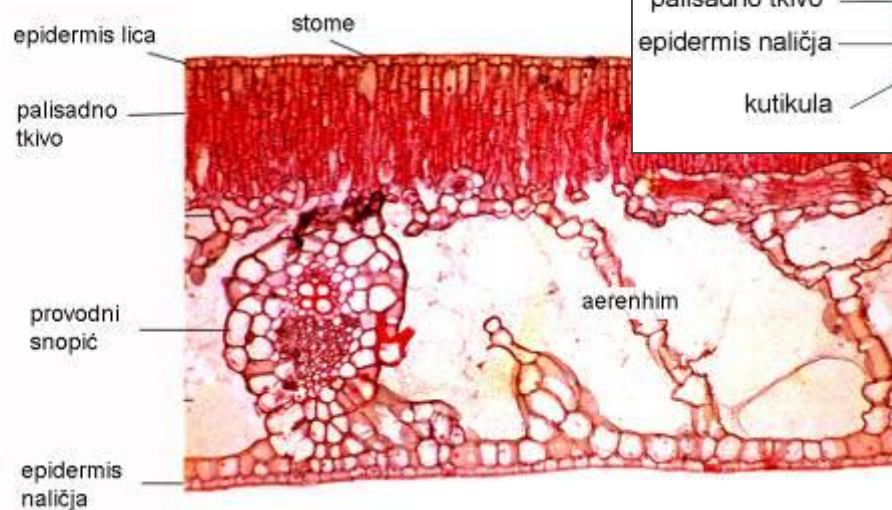
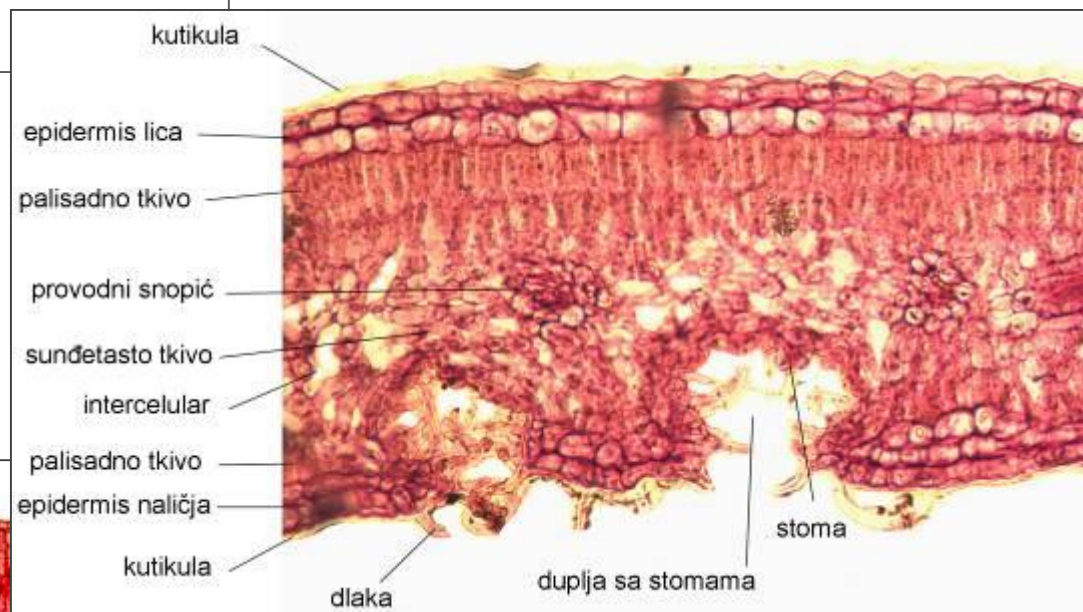
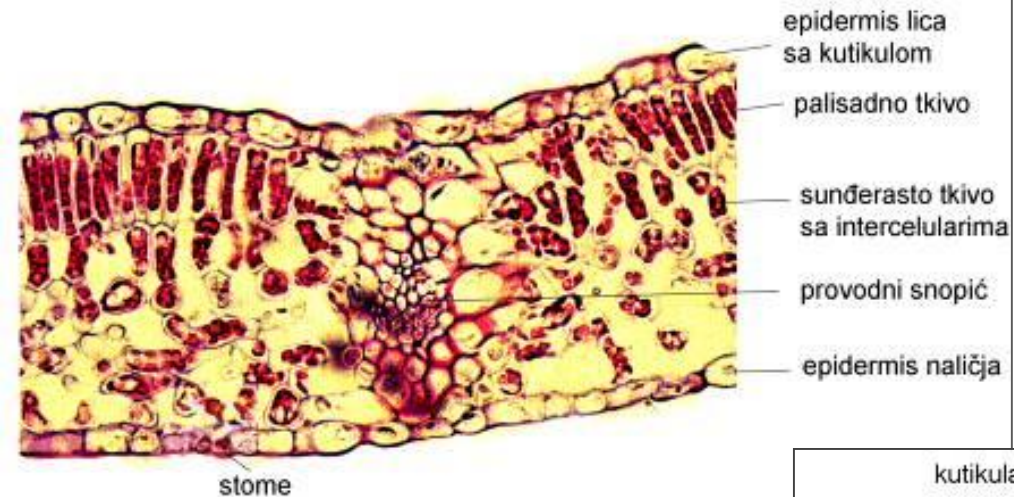


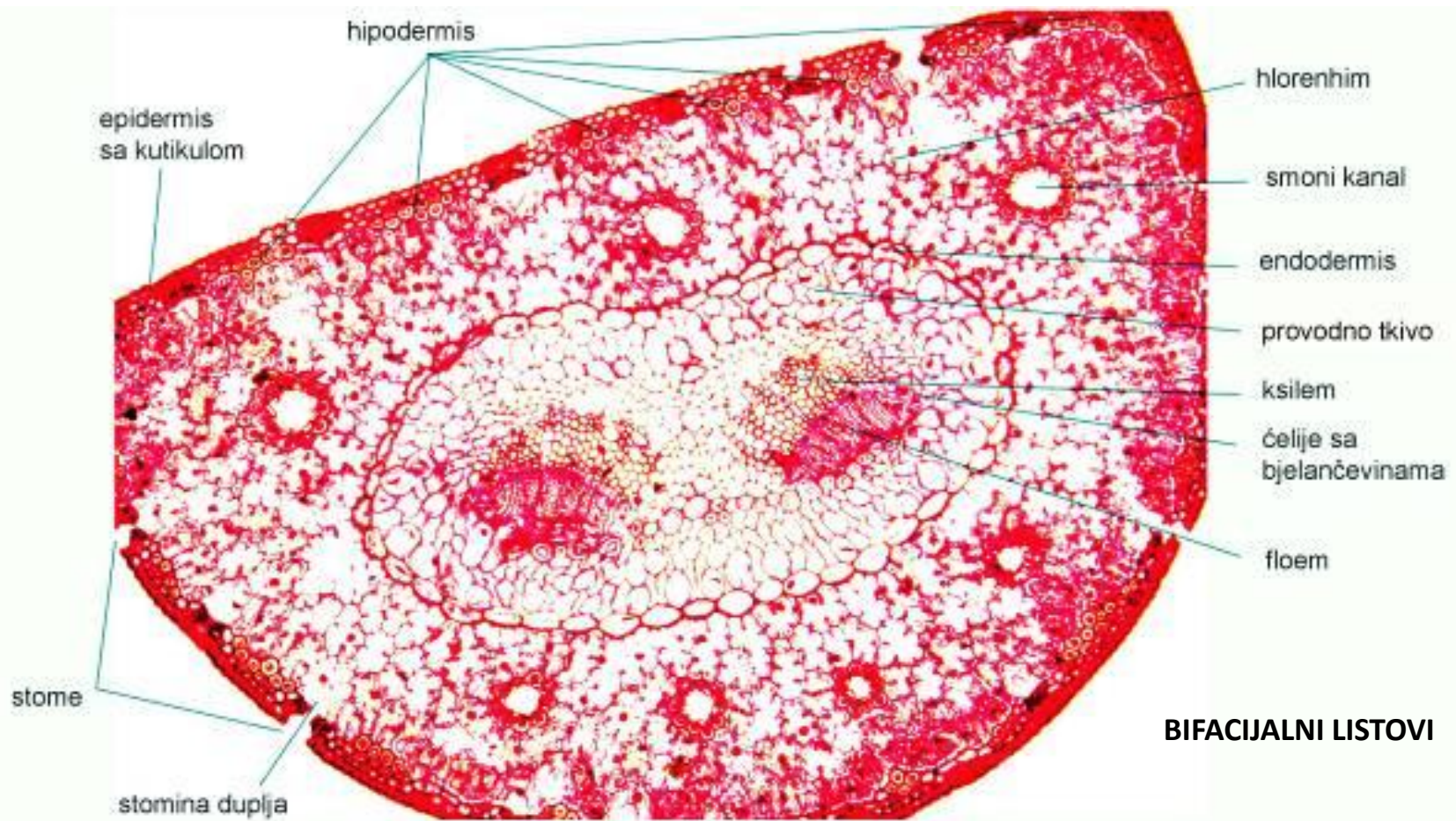
Otvoreni kolateralni
provodni snopić

Anatomska građa lista



list





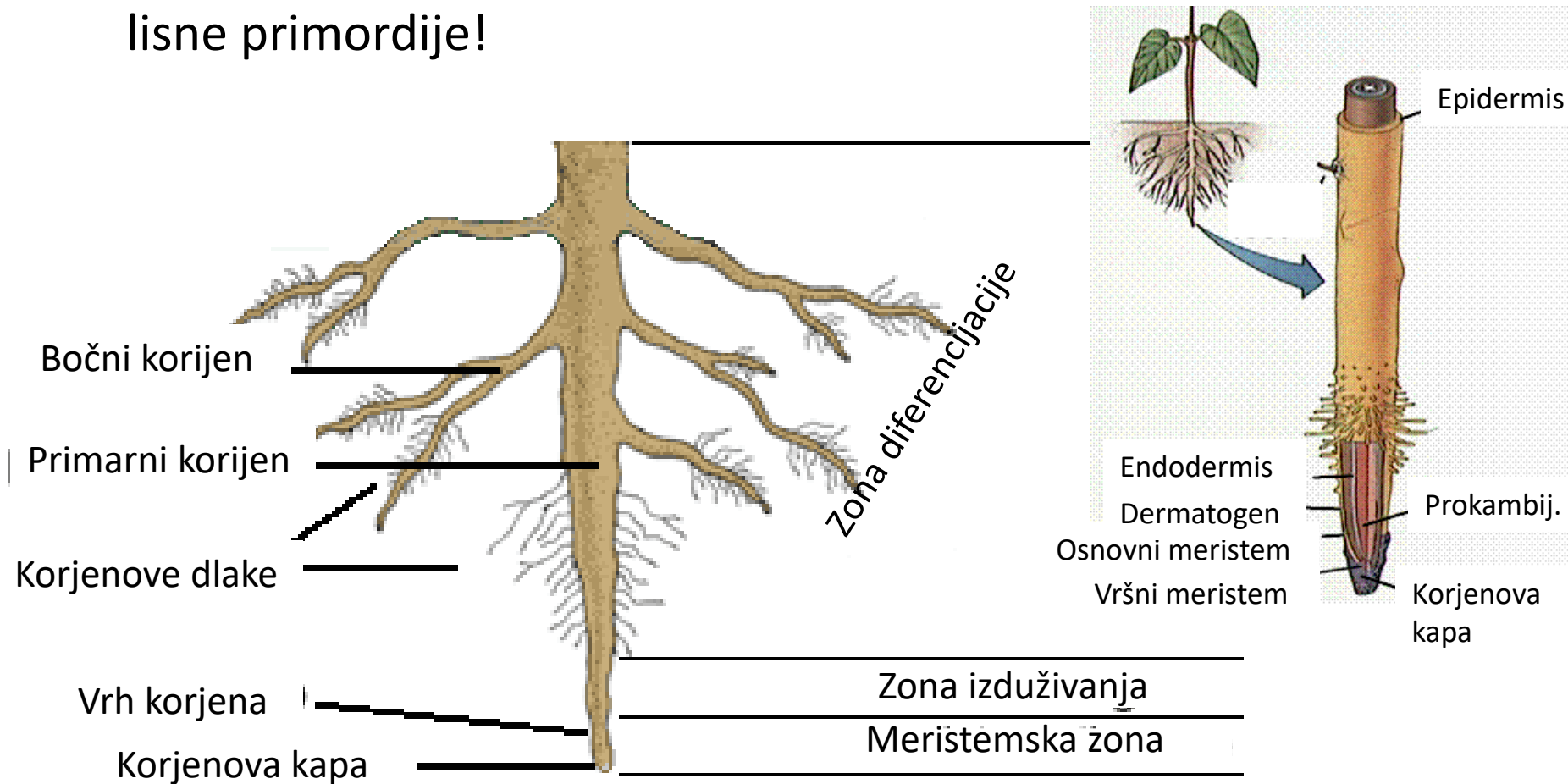
BIFACIJALNI LISTOVI

EKVIFACIJALAN LIST

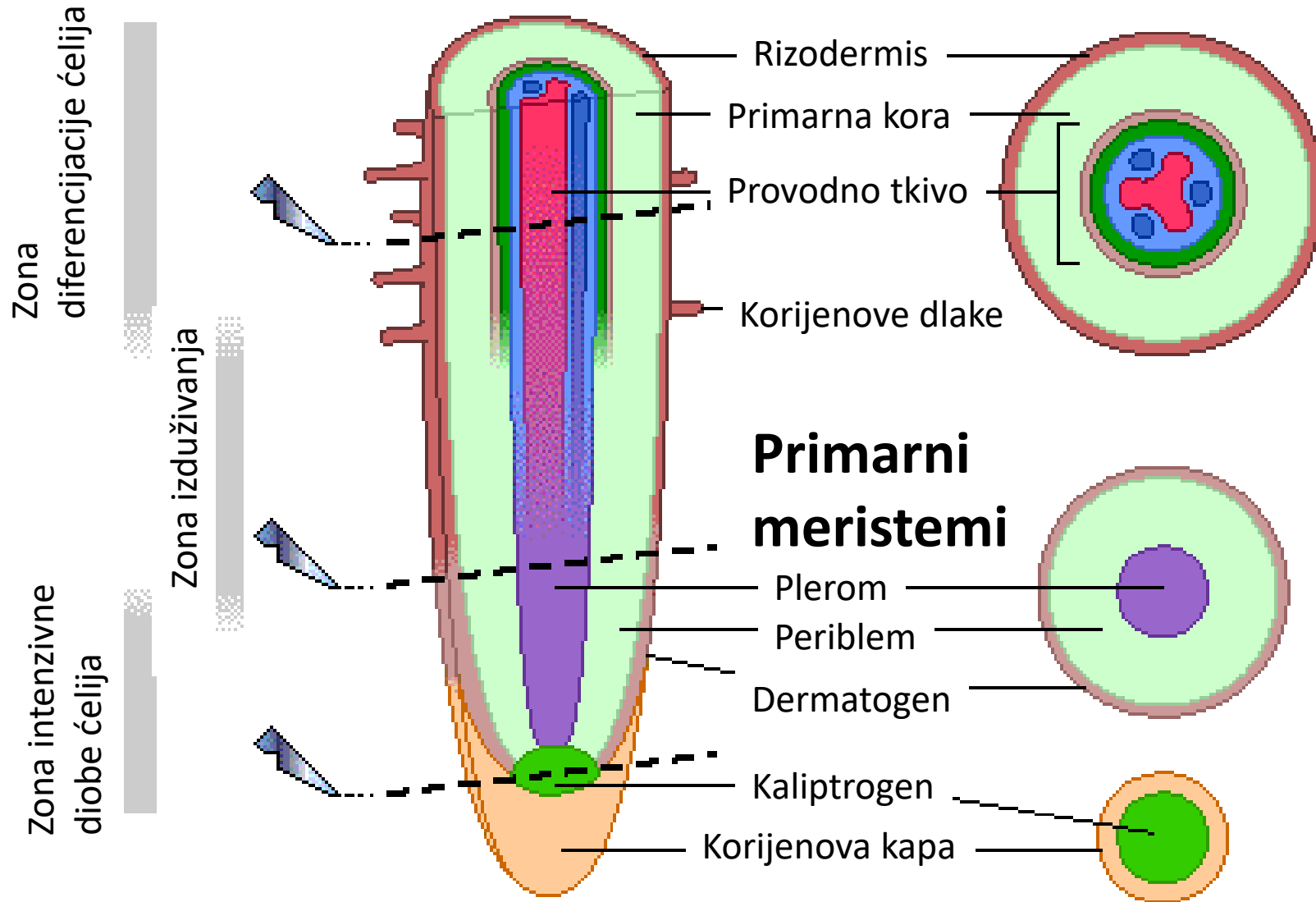
UNIFACIJALA LIST

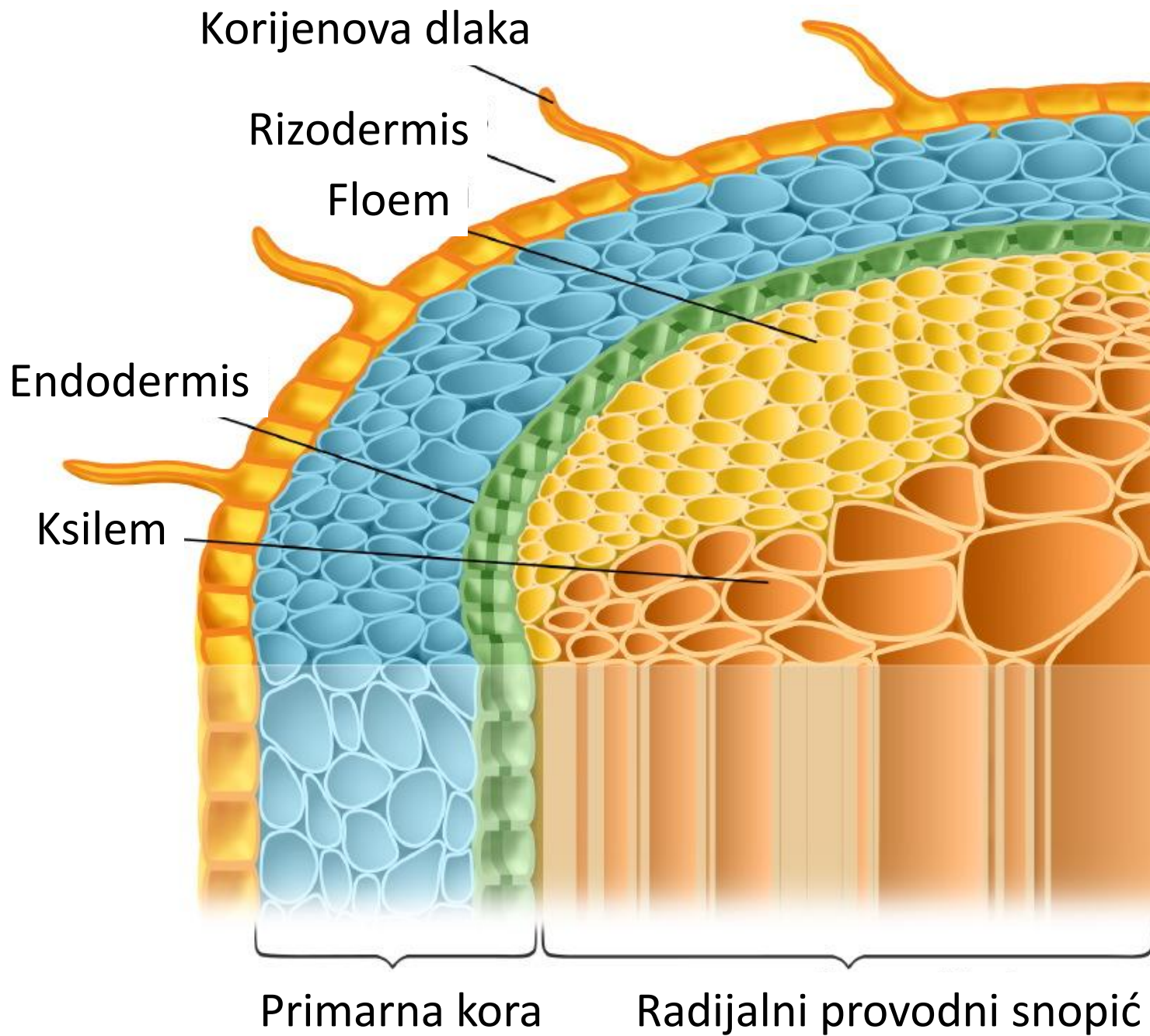
Korijen

- Podzemni organ radijalne simetrije na kojem se ne obrazuju lisne primordije!

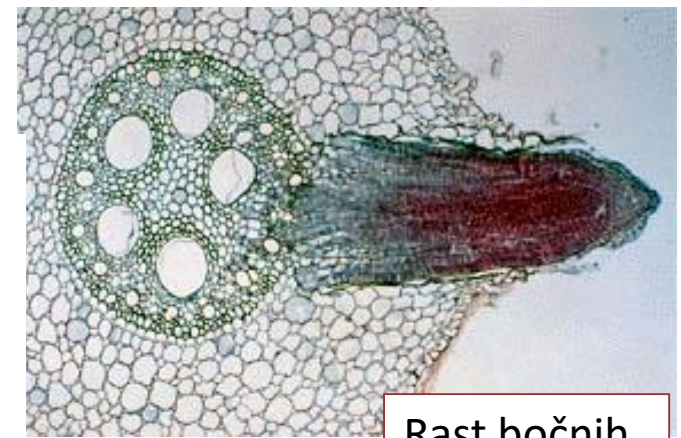
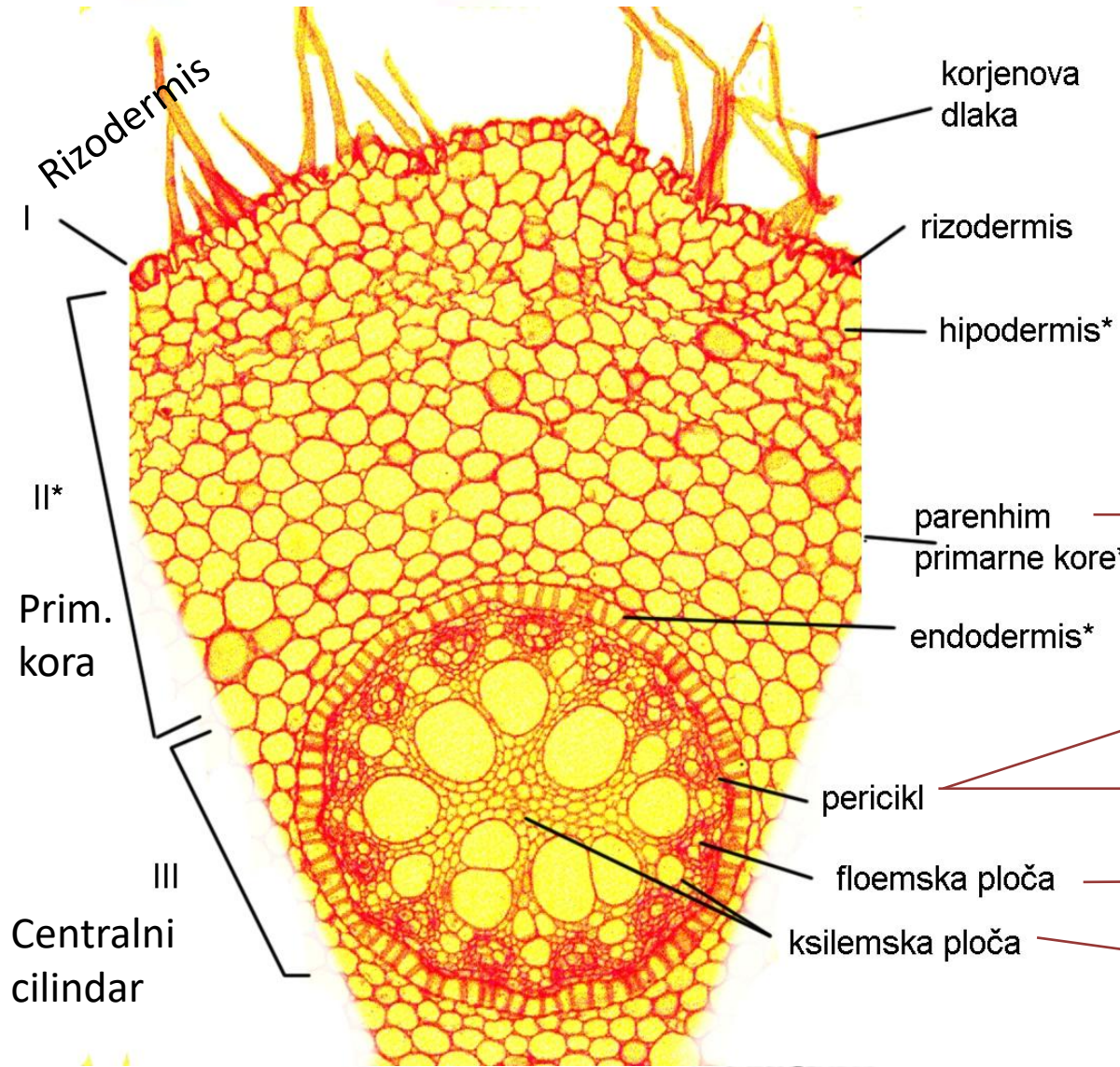


Primarna građa korijena

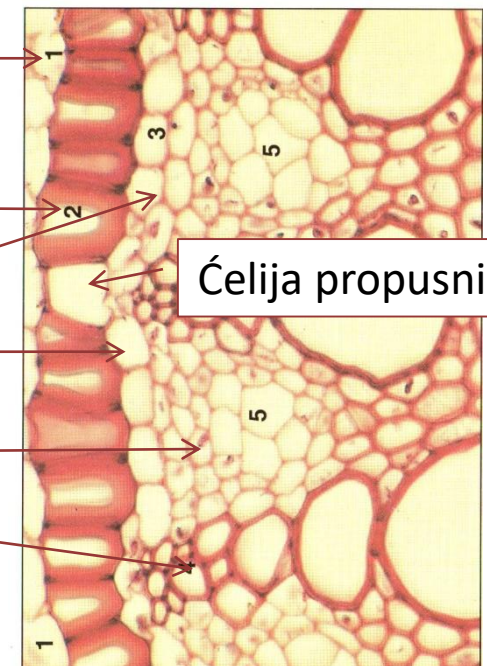




Presjek kroz zonu korjenovih dlaka



Rast bočnih korjenova

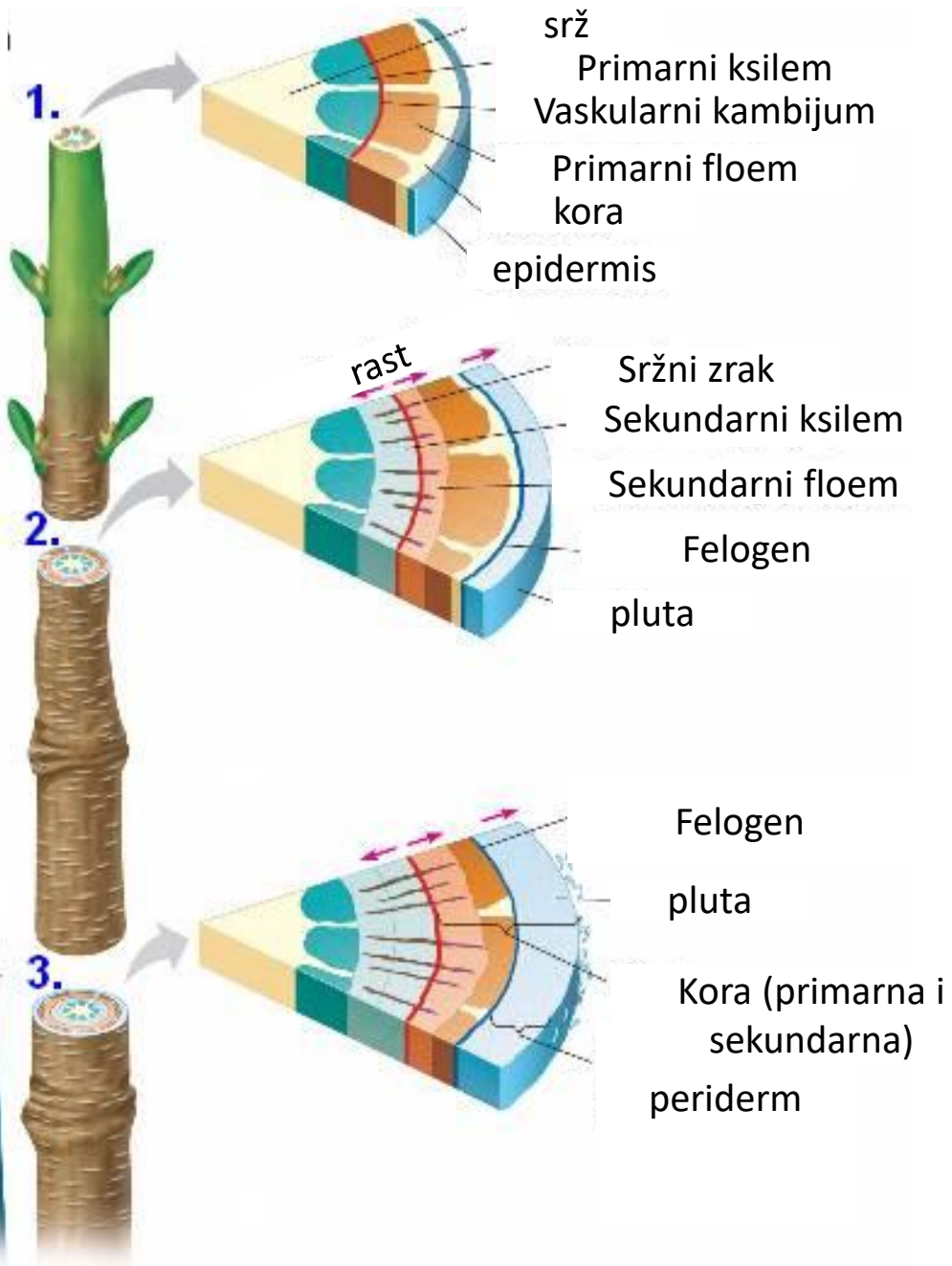
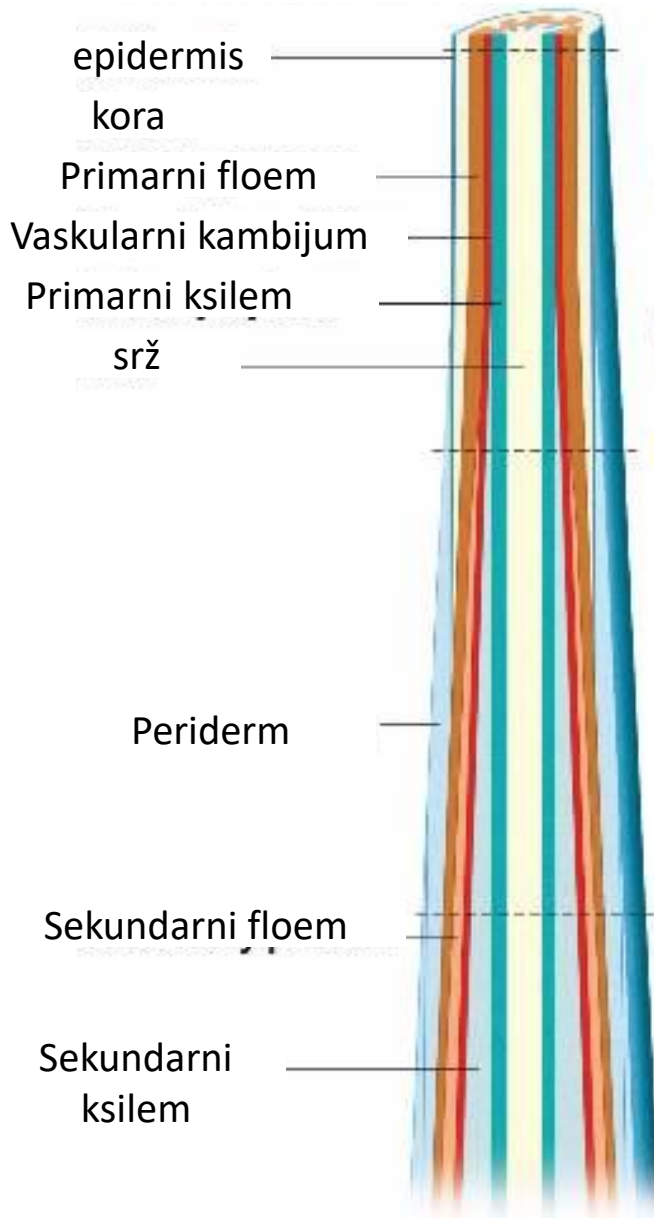


Ćelija propusnica

Kasparijeva zadebljanja ...

Sekundarni rast stabla

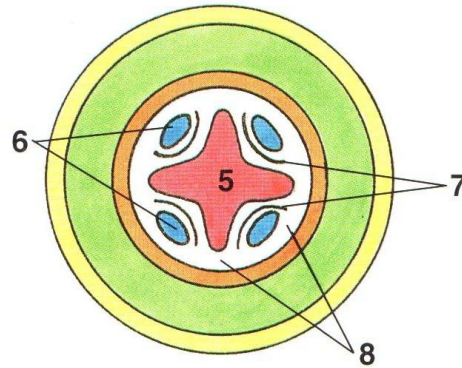
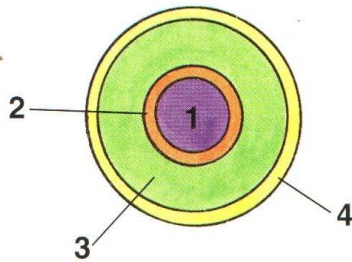
Sekundarni rast stabla



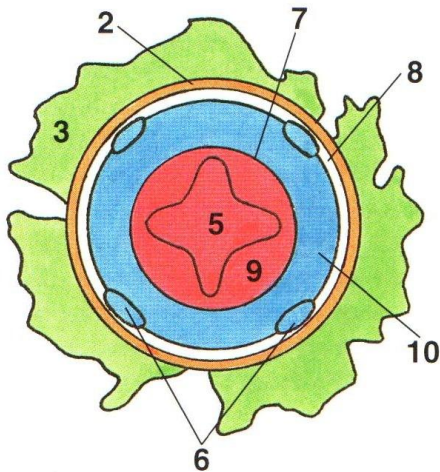
Sekundarni rast korijena

Presjek kroz zonu iznad korijenovih dlaka

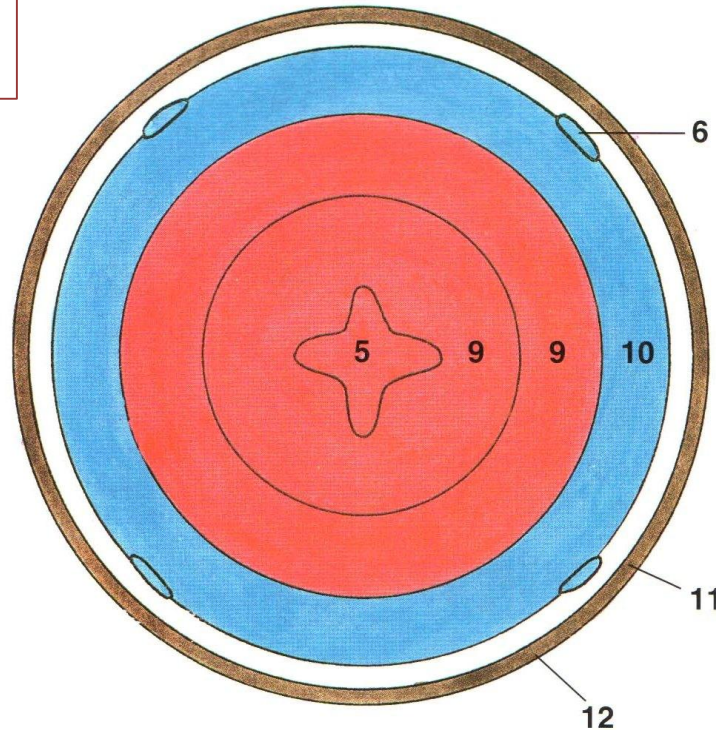
Presjek vrha korijena



Formiranje prstena od vaskularnog kambijuma



Sekundarno debljanje



- 1- prokambijum
- 2- endodermis
- 3- primarna kora
- 4- rizodermis
- 5- ksilem
- 6- floem
- 7- vaskularni kambijum
- 8- pericikl
- 9- sekundarni ksilem
- 10- sekundarni floem
- 11- felogen
- 12- peridermis