

# Samčí gametofyt

Rostlinná embryologie 2024 – Hana Cempírková



Jak vznikají  
tyčinky?

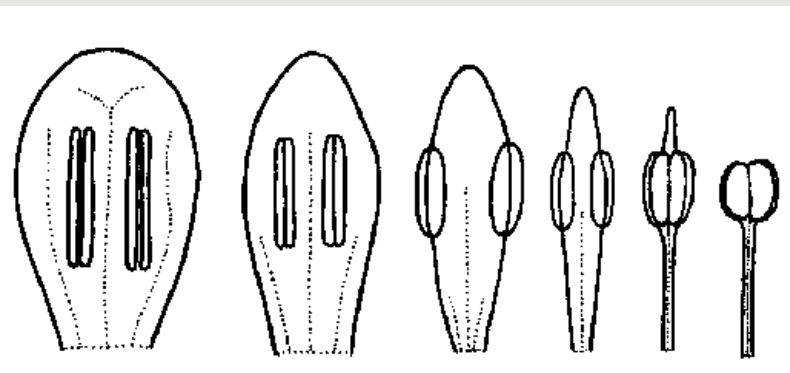
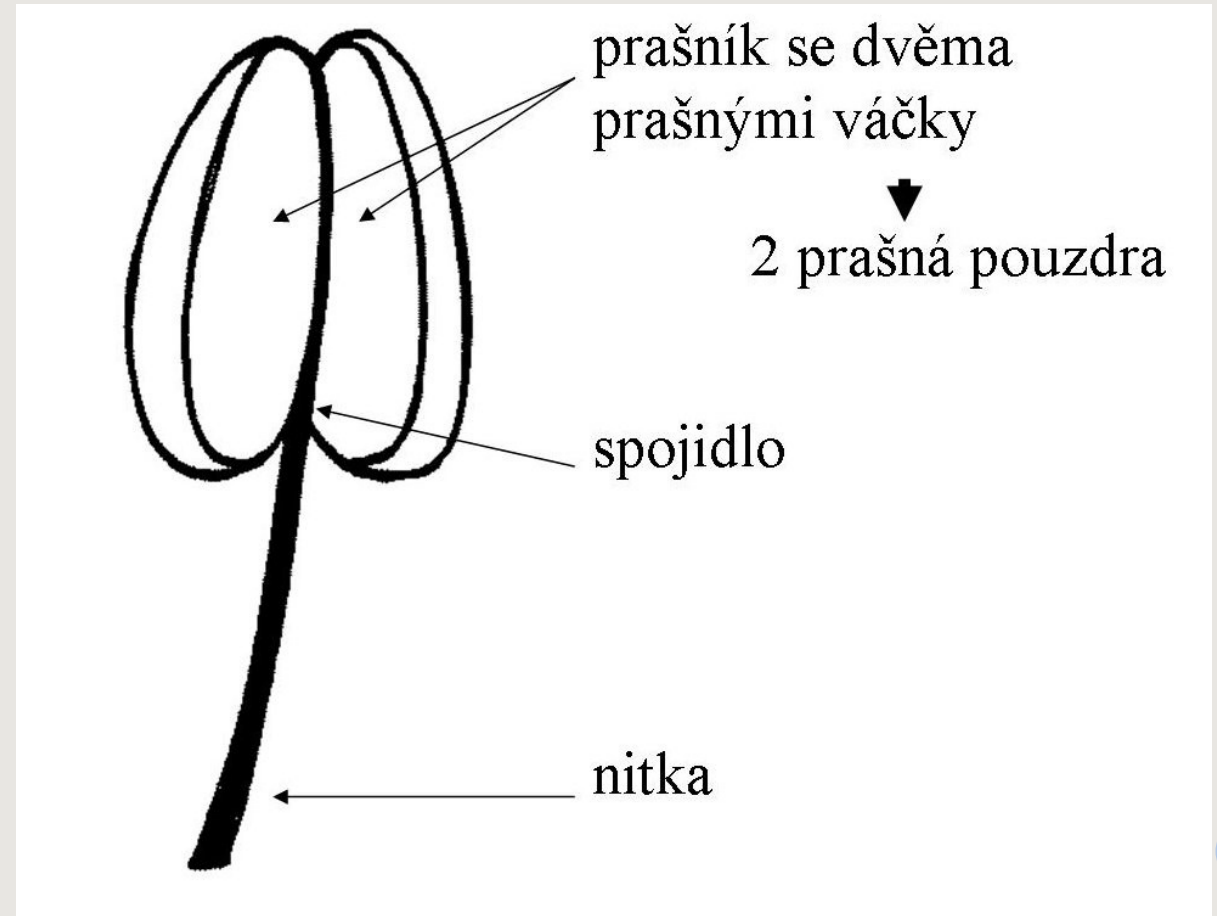
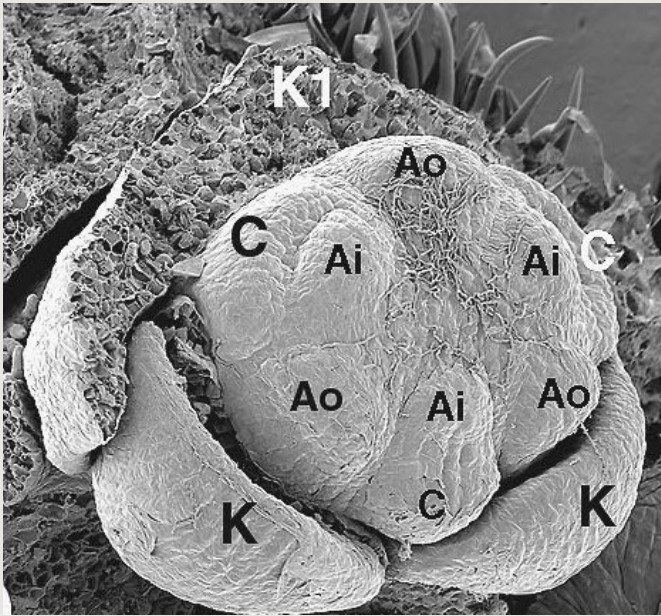
Jak vzniká pyl?

Jak vypadá  
pylové zrno  
zblízka?

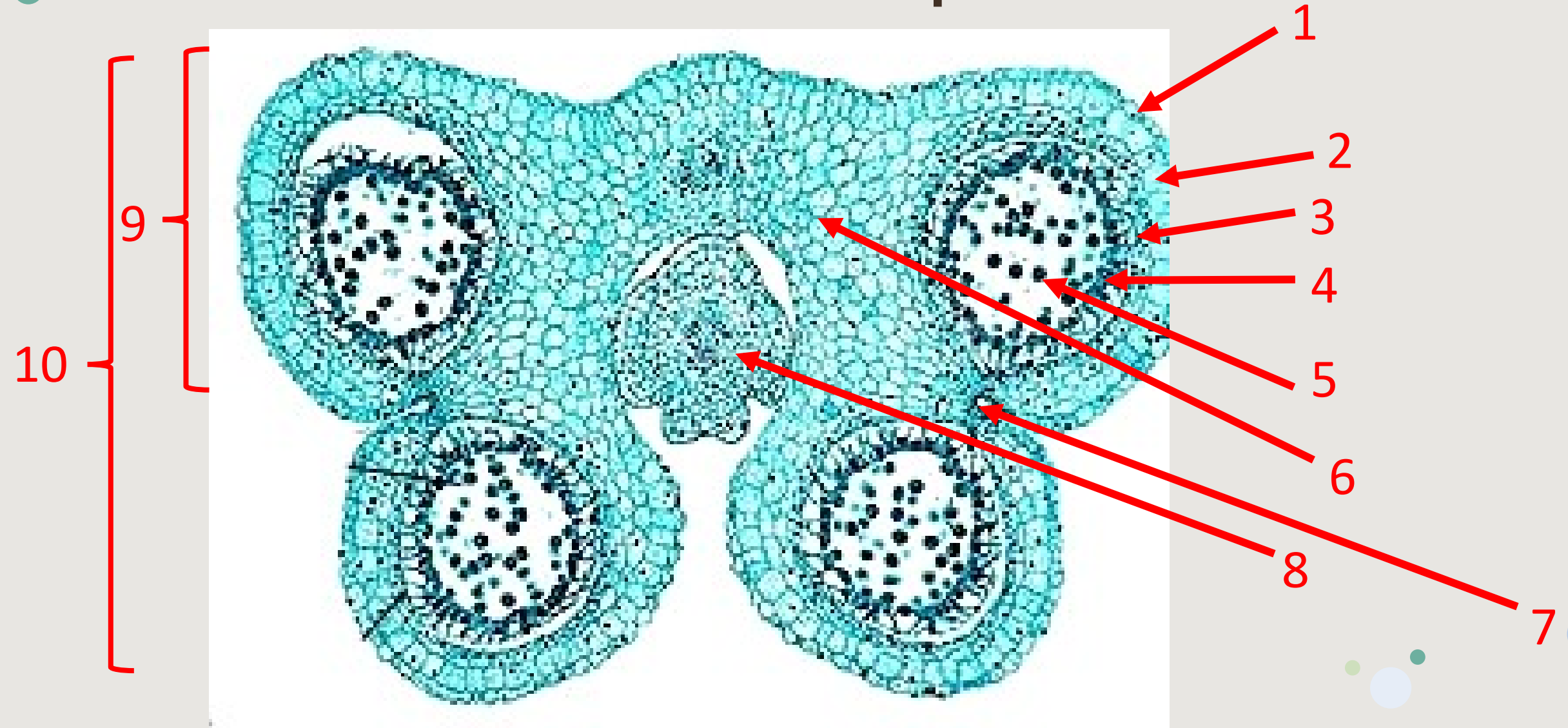


# Tyčinka – samčí rozmnožovací orgán

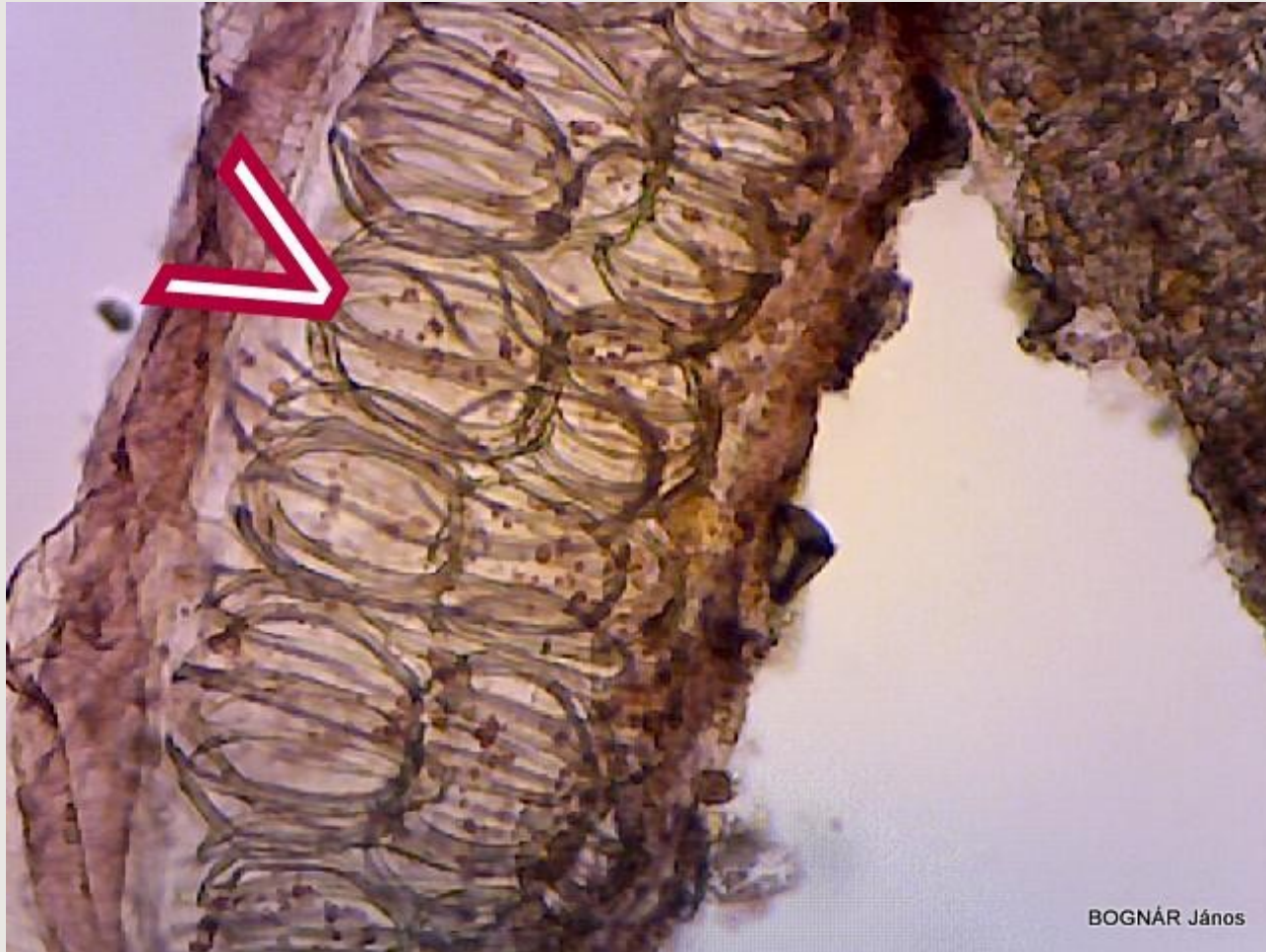
## Androeceum – soubor tyčinek



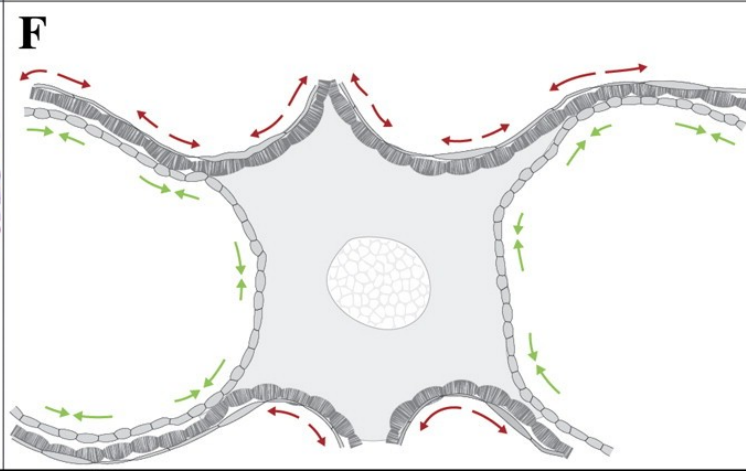
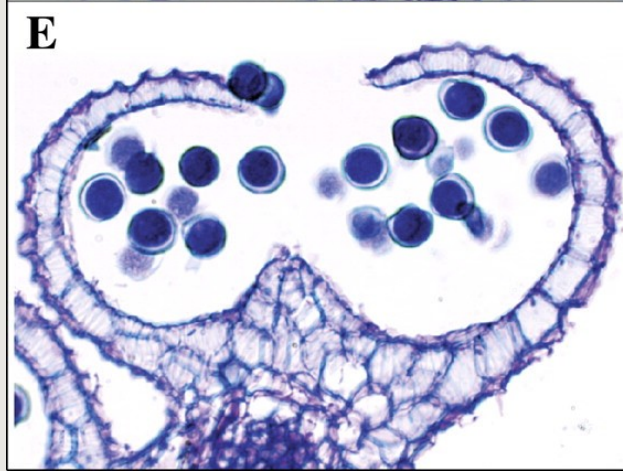
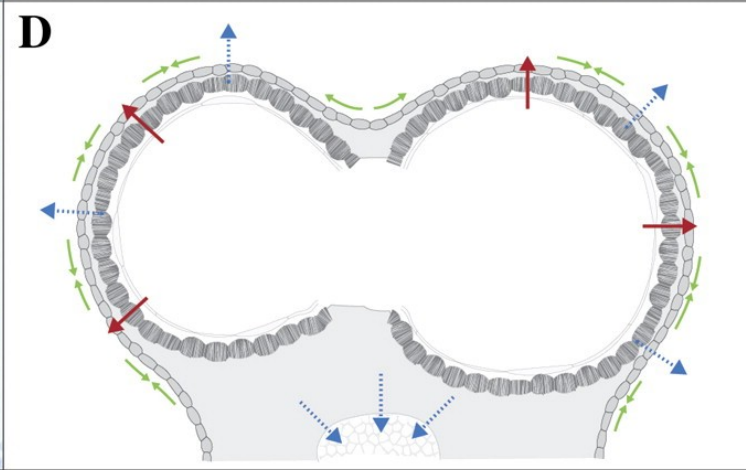
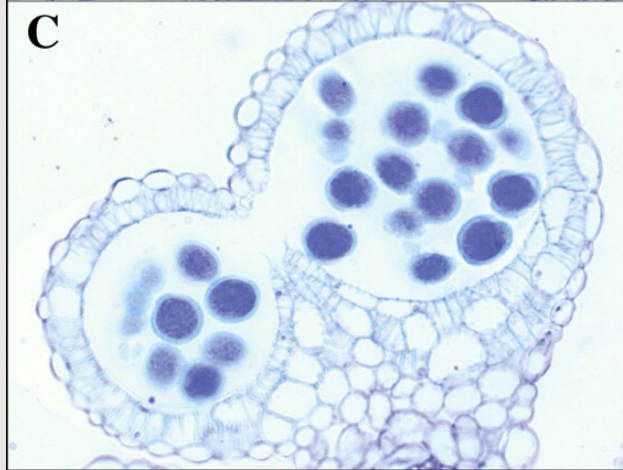
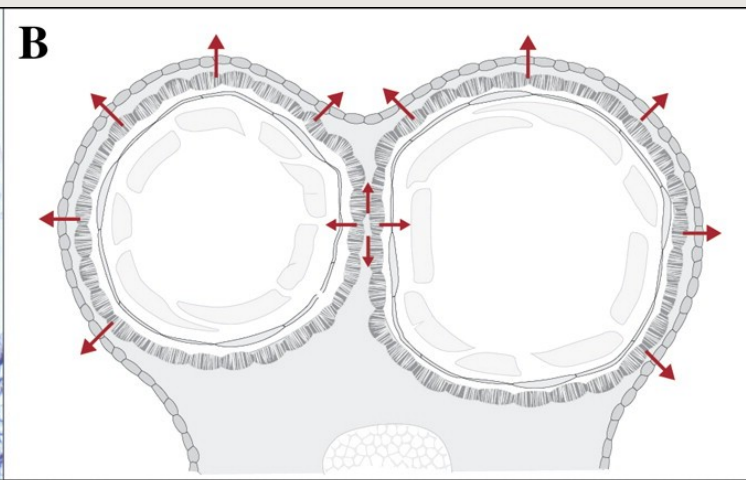
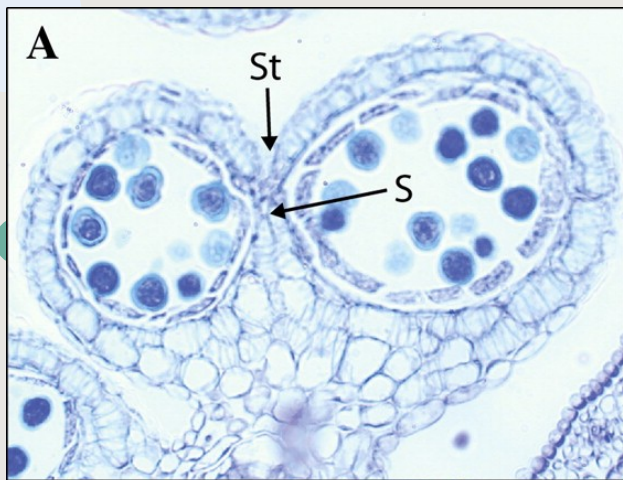
# Anatomická stavba prašníku



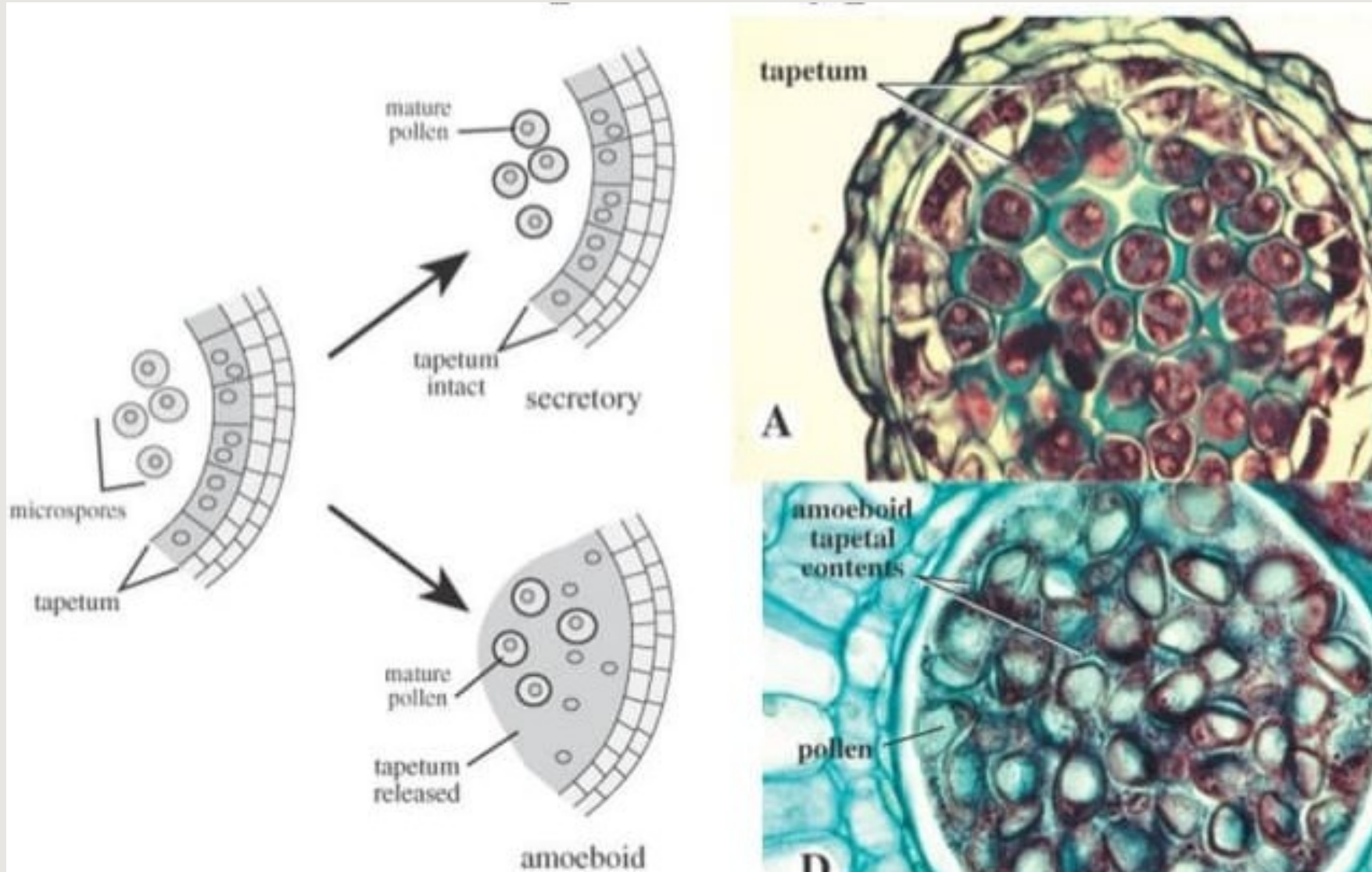
# Endothecium



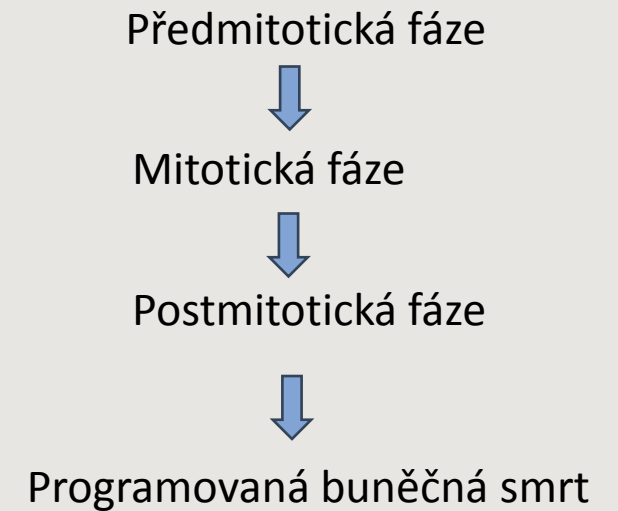
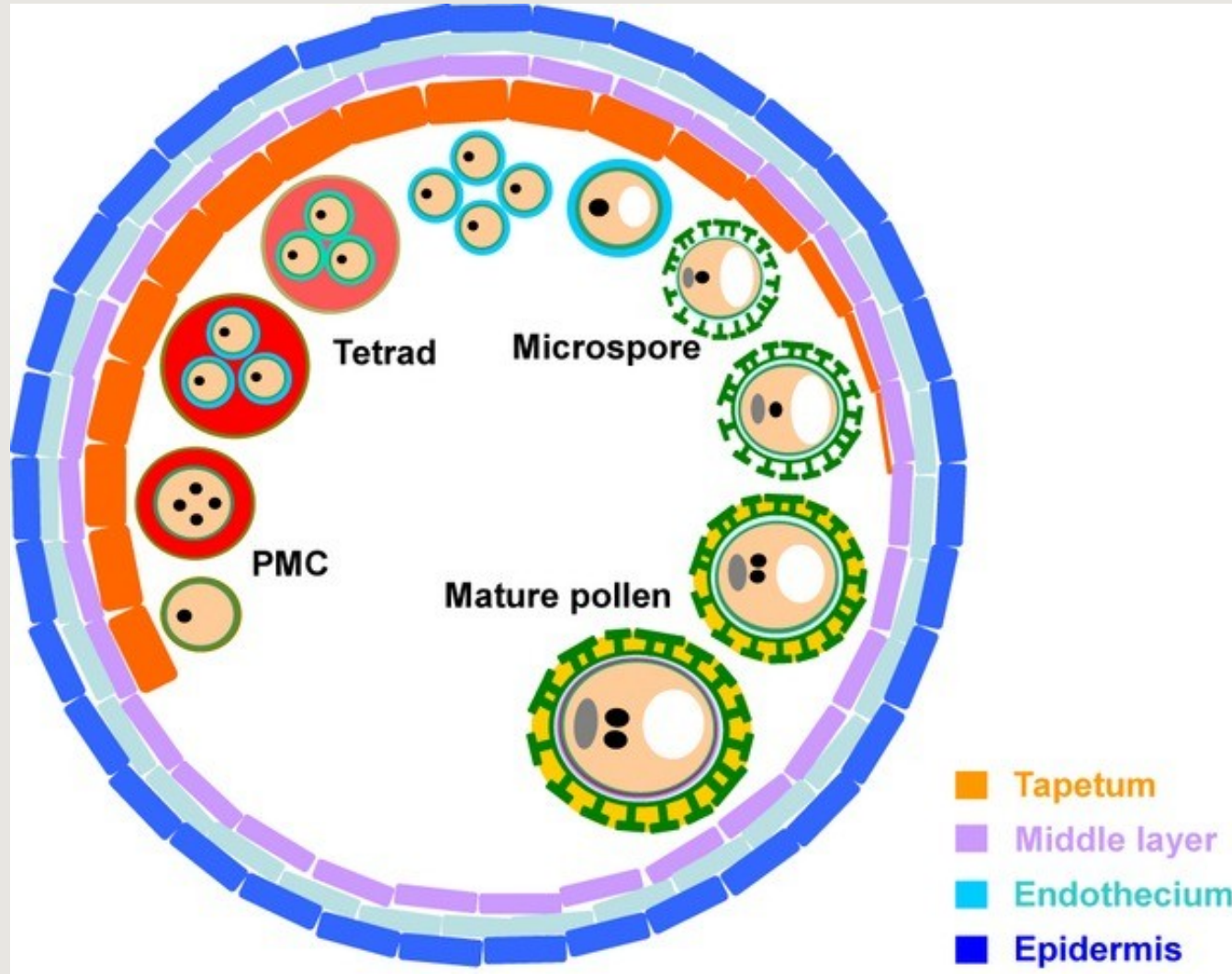
# Dehiscence prašníku



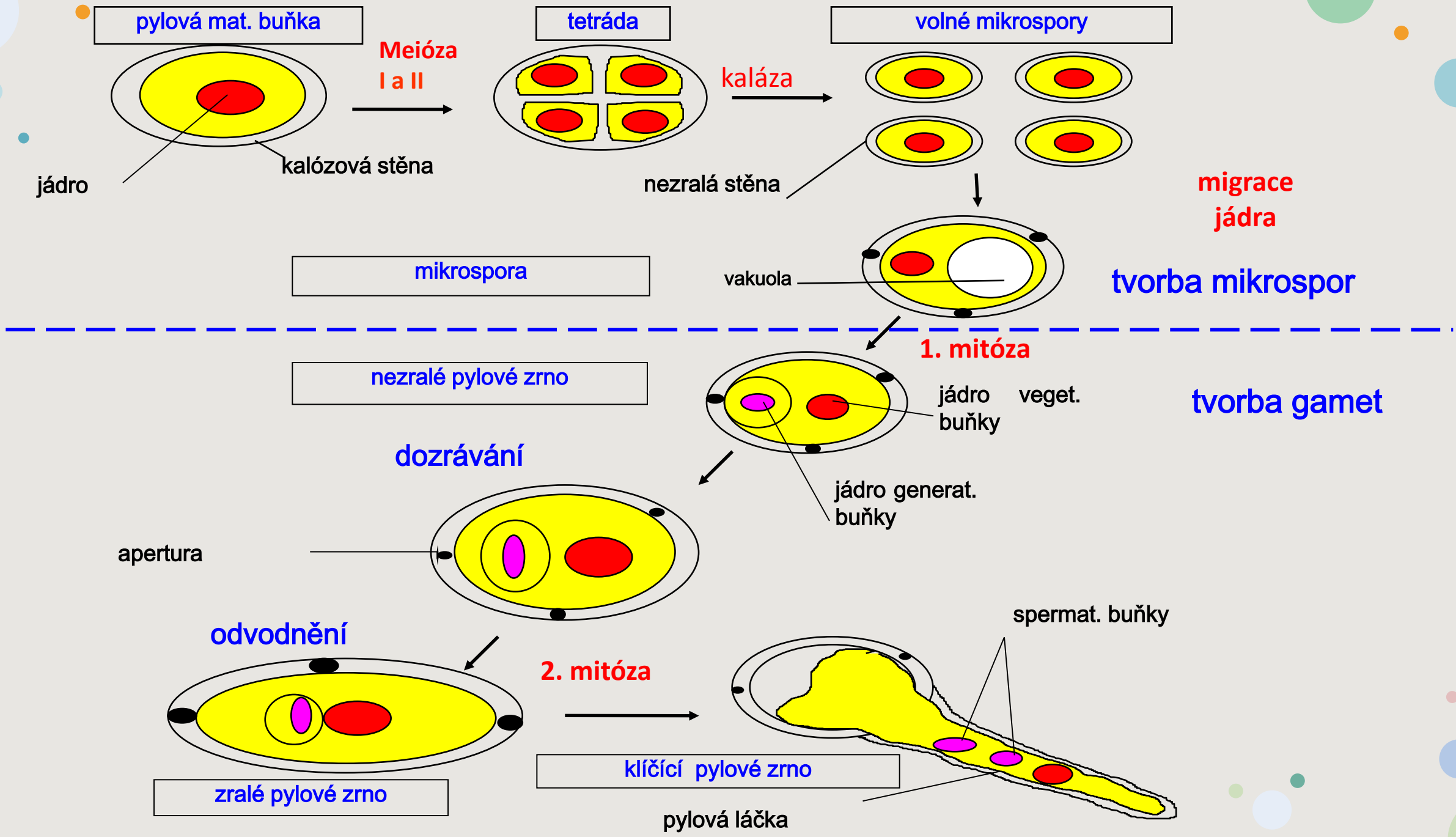
# Tapetum – žlaznaté a améboidní



# Vývoj tapeta je synchronizovaný z vývojem mikrospor

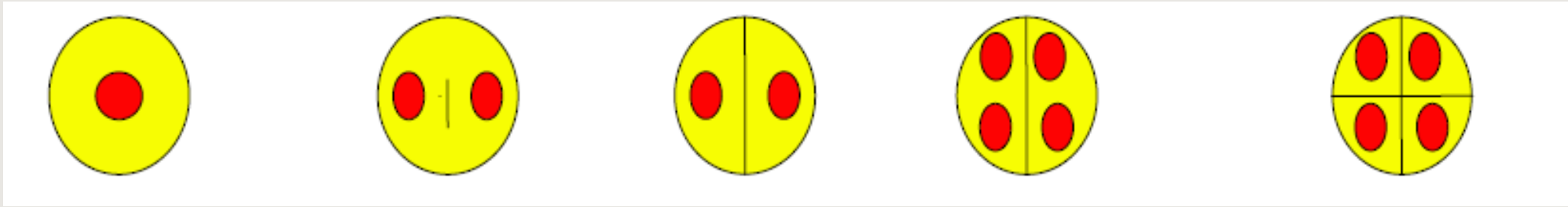




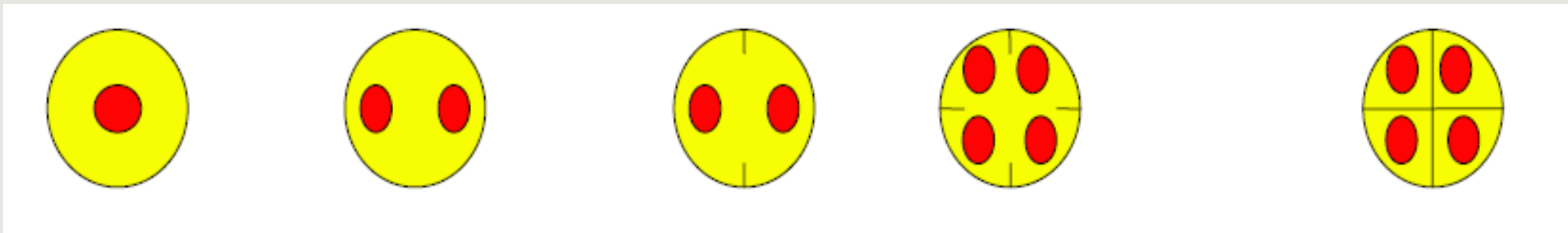


# Typy tvorby tetrad

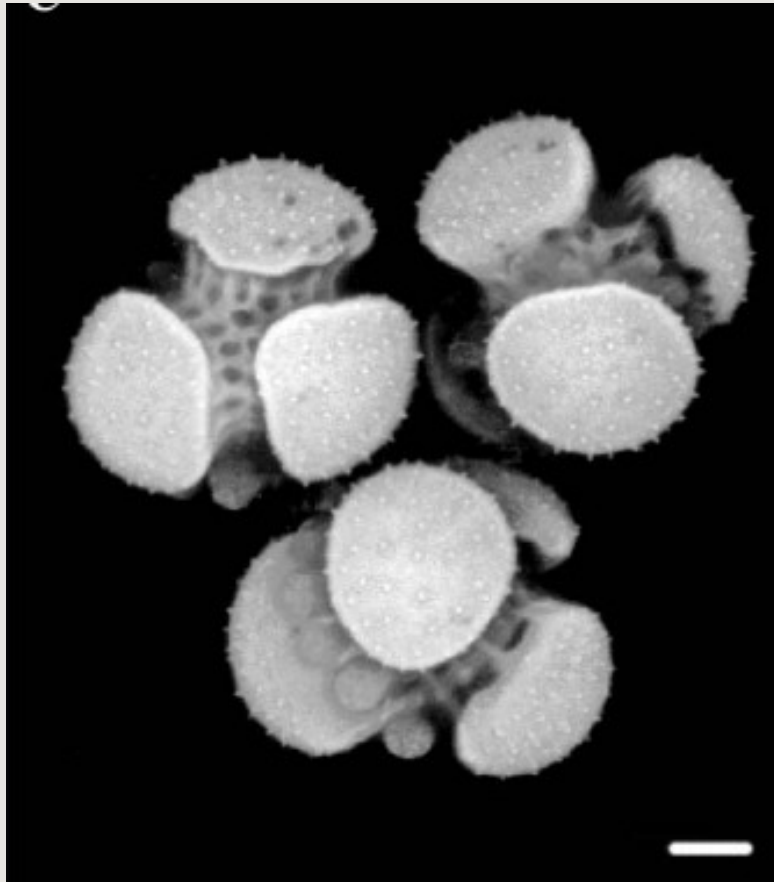
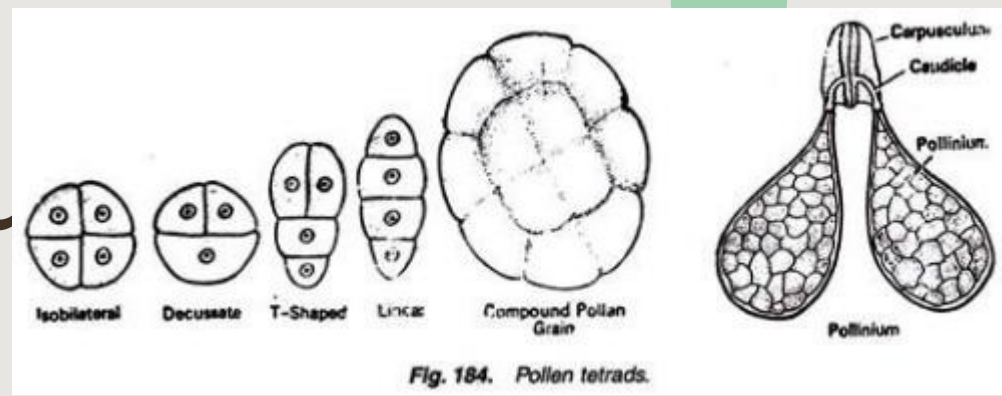
sukcesivní typ



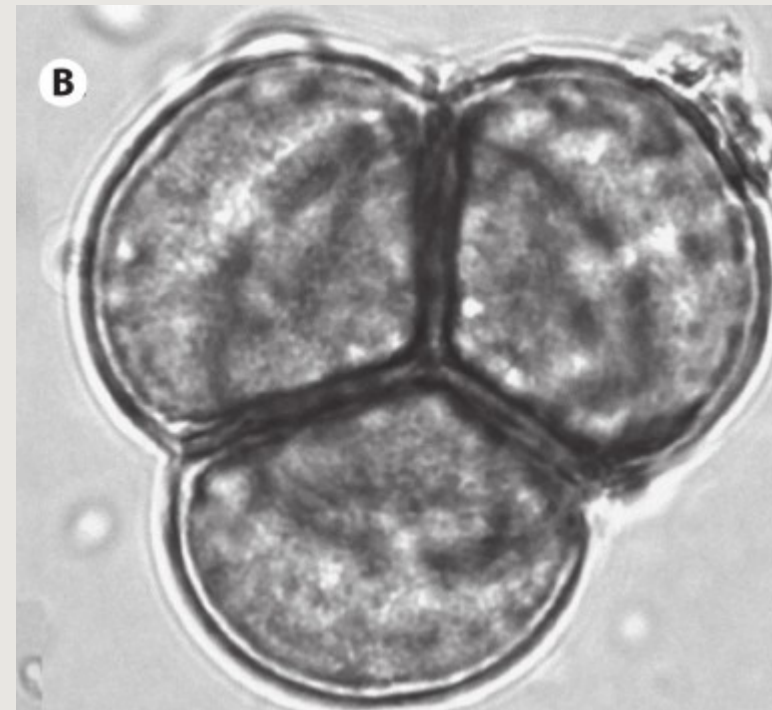
simultánní typ



# Přirozené tetrády pylu

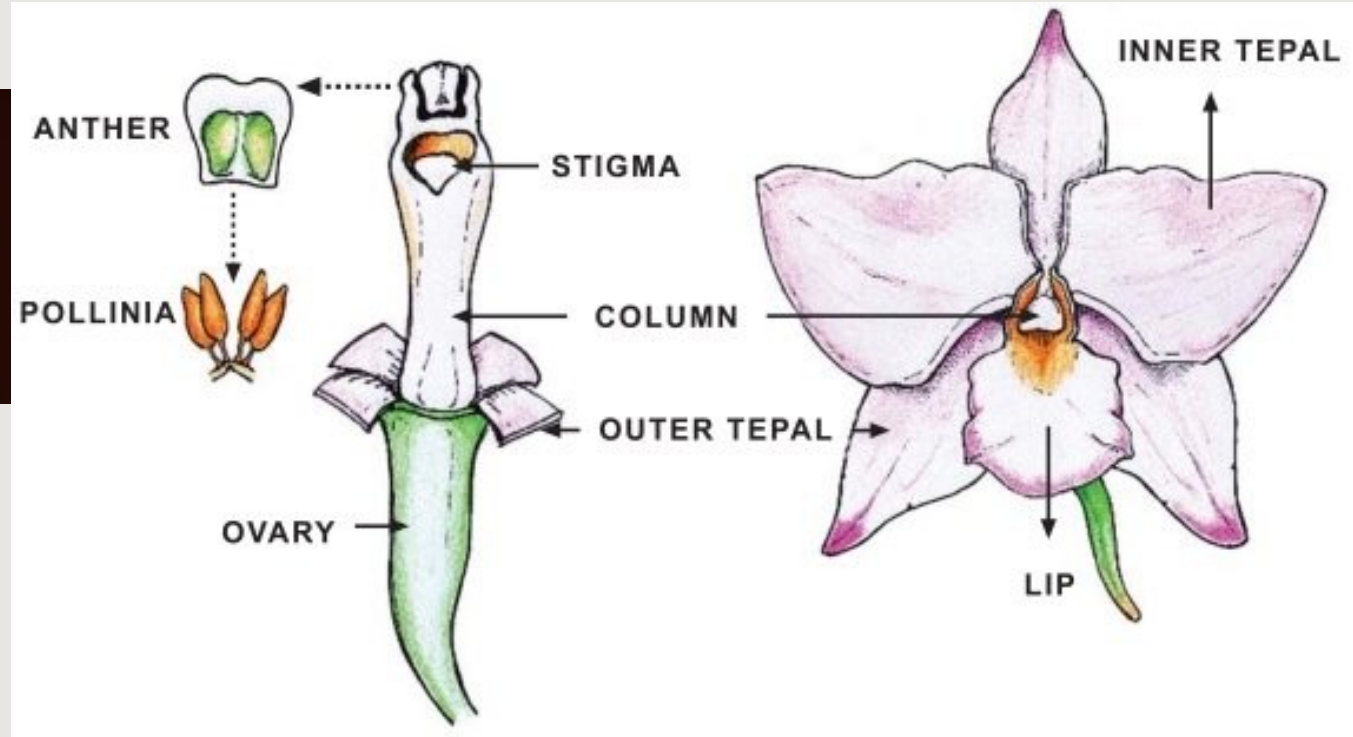


Drosera (rosnatka)

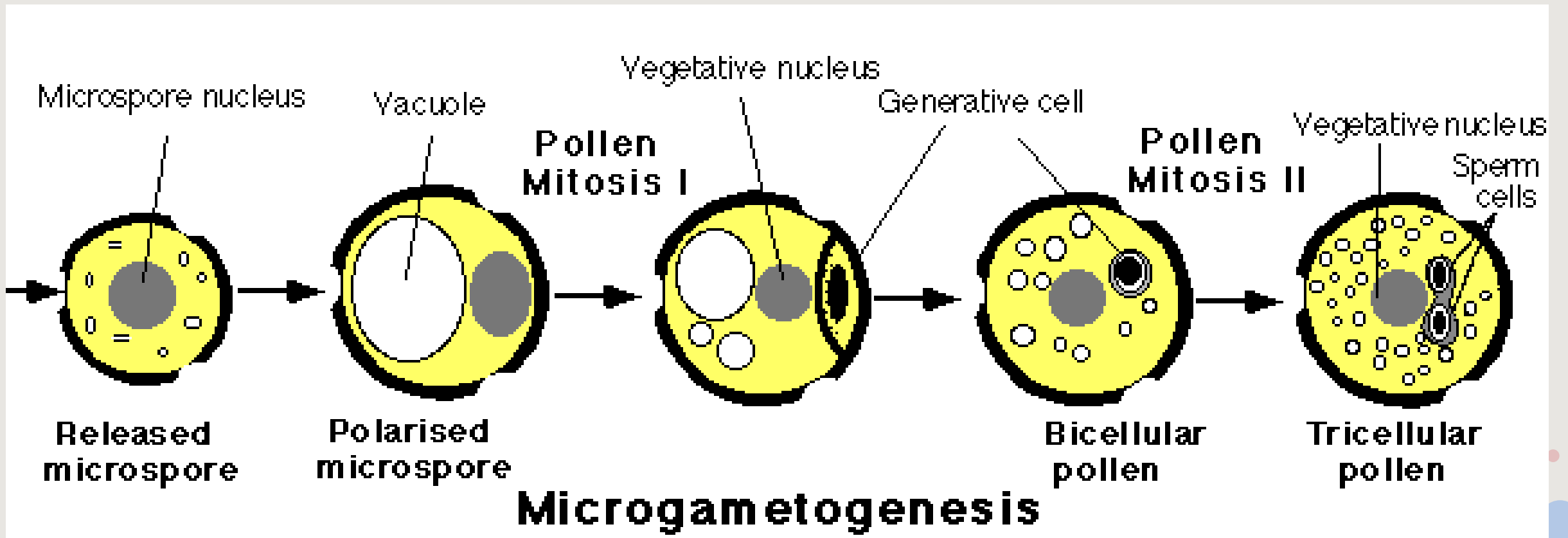


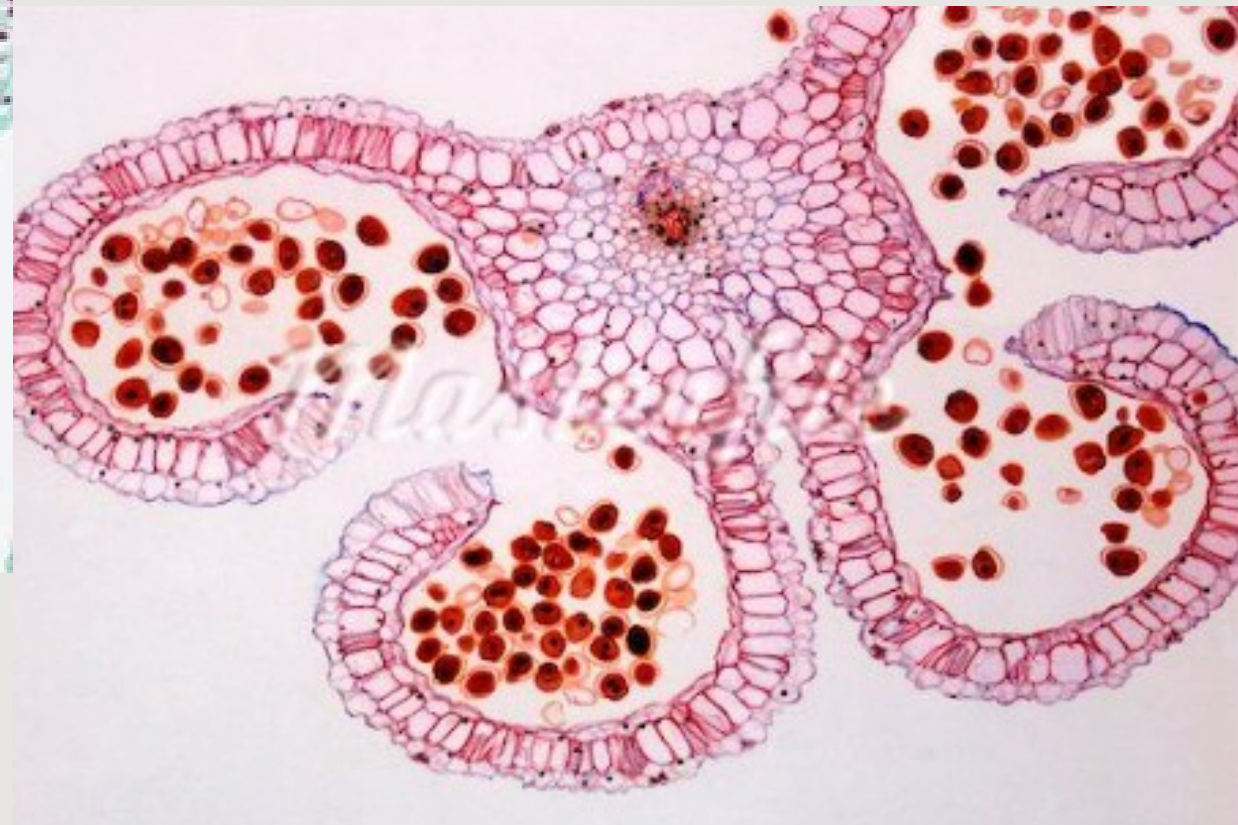
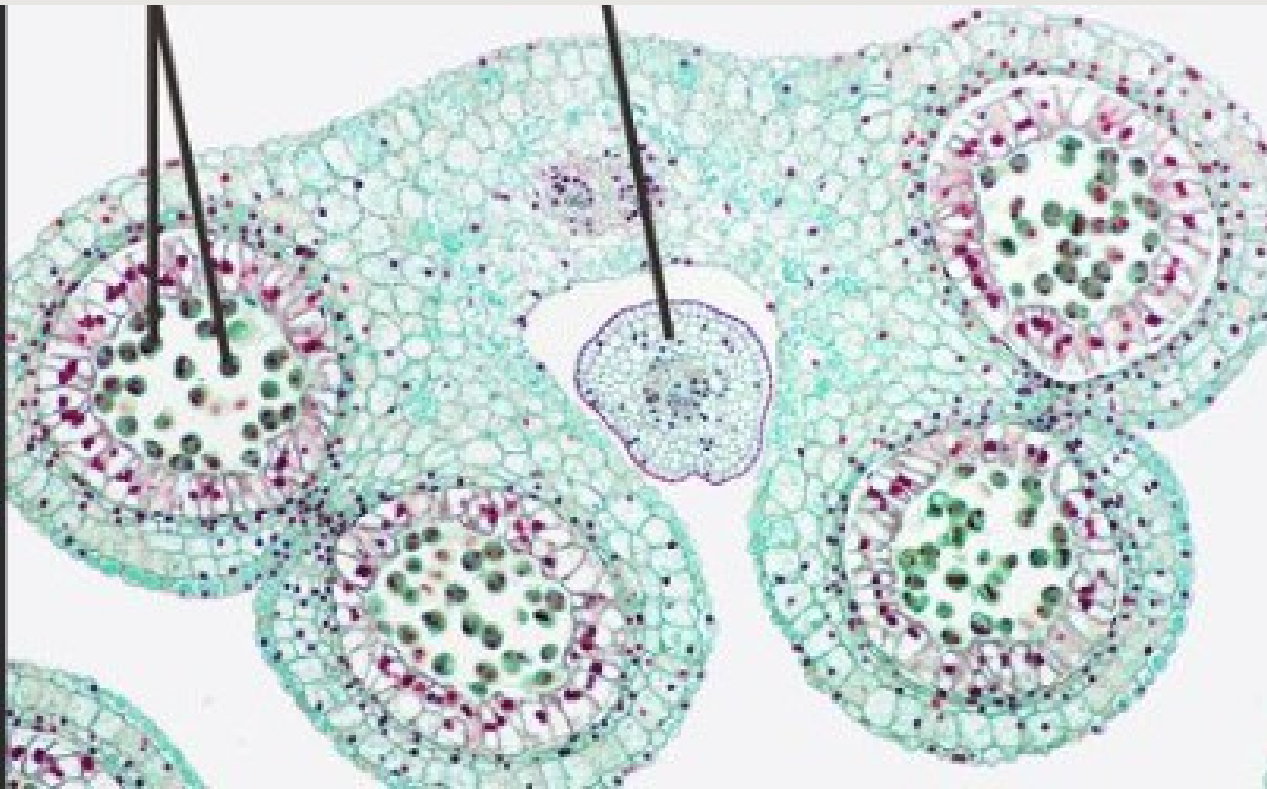
Ericaceae (vřesovité)

# Polinárium (brylky) orchidejí



# Dvojbuněčný a trojbuněčný pyl



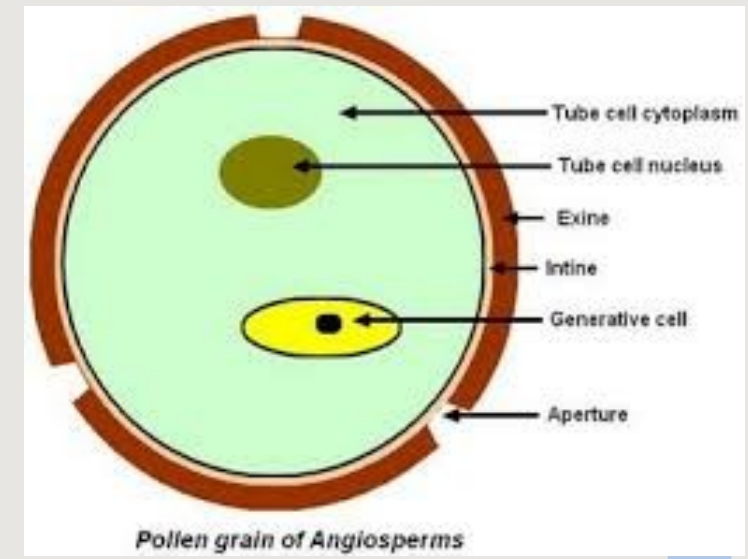
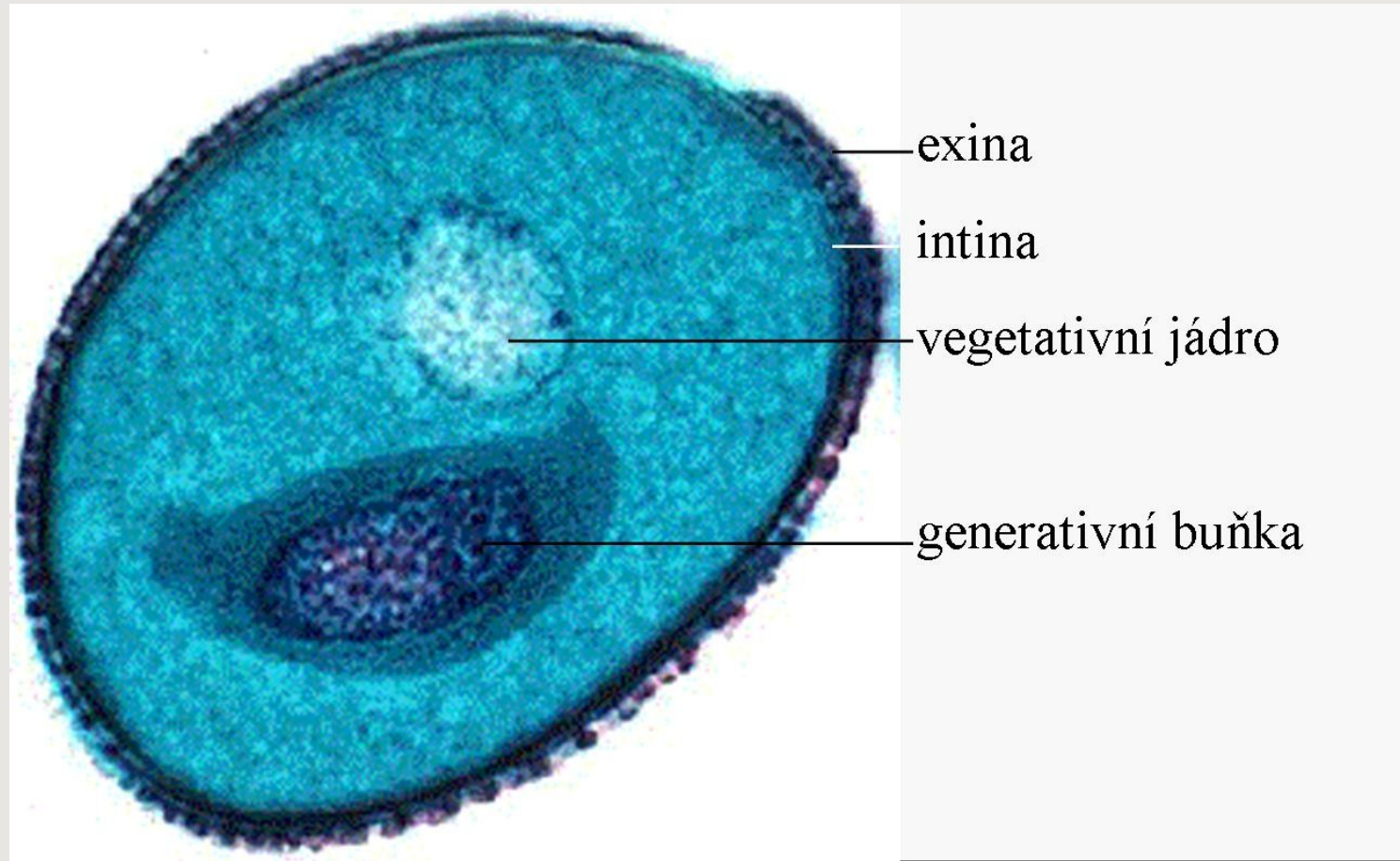


Srovnejte stavbu mladšího a staršího prašníku.

Přestávka



# Stavba pylového zrna





# Klasifikace pylových zrn NPC

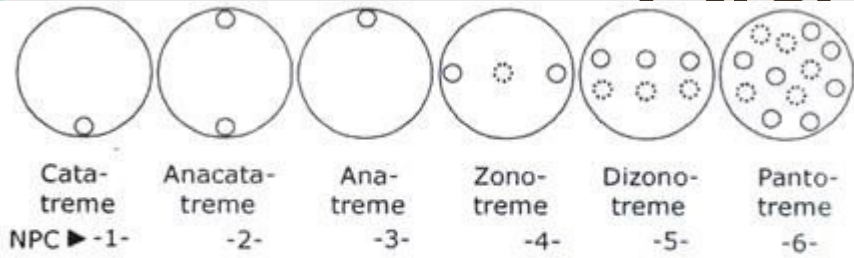


Figure 4.26

Number of apertures (N) ▶	Ditreme 2 --	Tritreme 3 --	Tetratrema 4 --
Zonoporate NPC (-44) ▶	 244 Di-zonoporate Ex. <i>Colchicum</i>	 344 Tri-zonoporate Ex. <i>Betula</i>	 444 Tetra-zonoporate Ex. <i>Alnus</i>
Zonocolpate NPC (-43) ▶	 243 Di-zonocolpate Ex. <i>Tofieldia</i>	 343 Tri-zonocolpate Ex. <i>Acer</i>	 443 Tetra-zonocolpate Ex. <i>Hippuris</i>
Zonocolporate NPC (-45) ▶	 245 Di-zonocolporate Ex. <i>Justicia simplex</i>	 345 Tri-zonocolporate Ex. <i>Lippia alba</i>	 445 Tetra-zonocolporate Ex. <i>Rumex</i>

Figure 4.28

Diagrammatic representation of NPC of some pollen in polar view.

Number of apertures (N) ▶	Pentatrema 5 --	Hexatrema 6 --	Polytrema 7 --
Zonoporate NPC (-44) ▶	 544 Penta-zonoporate Ex. <i>Alnus</i>	 644 Hexa-zonoporate Ex. <i>Ulmus</i>	 744 Poly-zonoporate
Zonocolpate NPC (-43) ▶	 543 Penta-Zonocolpate	 643 Hexa-Zonocolpate	 743 Poly-Zonocolpate
Ex. Labiatae, Rubiaceae			
Zonocolporate NPC (-45) ▶	 545 Penta-zonocolporate Ex. <i>Viola</i>	 645 Hexa-zonocolporate Ex. <i>Sanguisorba officinalis</i>	 745 Poly-zonocolporate Ex. <i>Utricularia</i>

Figure 4.29

Diagrammatic representation of NPC of some pollen in polar view.

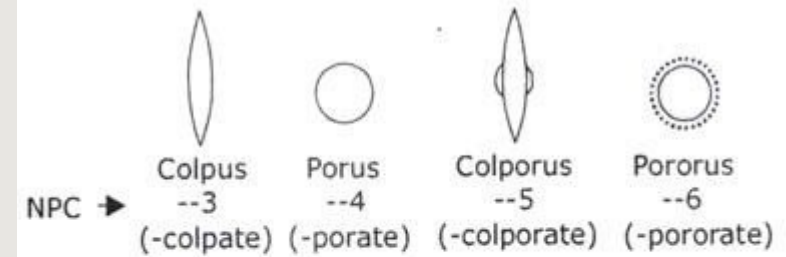


Figure 4.27

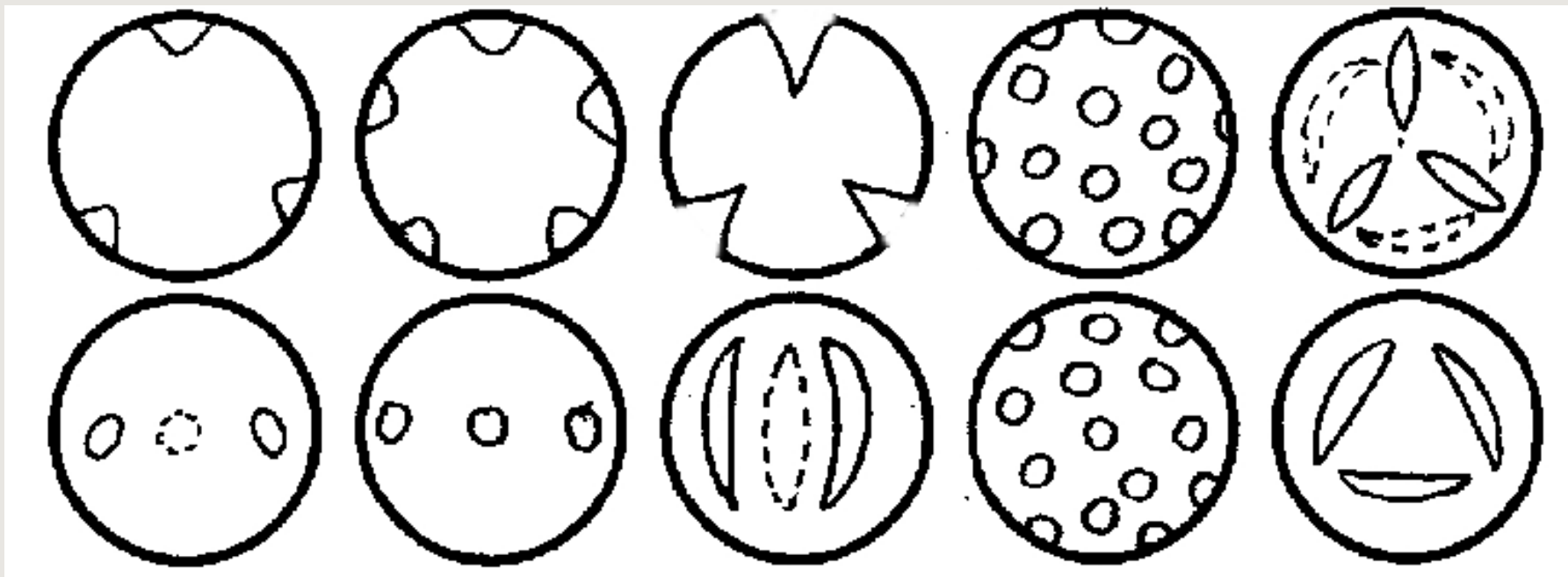
Schematic representation of character (C) of some apertures present in a pollen grain and its number in NPC. Dotted line indicates different plane of focus.

Number of apertures (N) ▶	Pentatrema 5 --	Hexatrema 6 --	Polytrema 7 --
Pantoporate NPC (-64) ▶	 564 Penta-pantoporate Ex. <i>Plantago</i>	 664 Hexa-pantoporate Ex. <i>Plantago</i>	 764 Poly-pantoporate Ex. <i>Chenopodium</i>
Pantocolpate NPC (-63) ▶	 563 Penta-pantocolpate	 663 Hexa-pantocolpate	 763 Poly-pantocolpate Ex. <i>Polygonum amphibium</i>
Pantocolporate NPC (-65) ▶	 565 Penta-pantocolporate	 665 Hexa-pantocolporate Ex. <i>Polygonum oxyspermum</i>	 765 Poly-pantocolporate

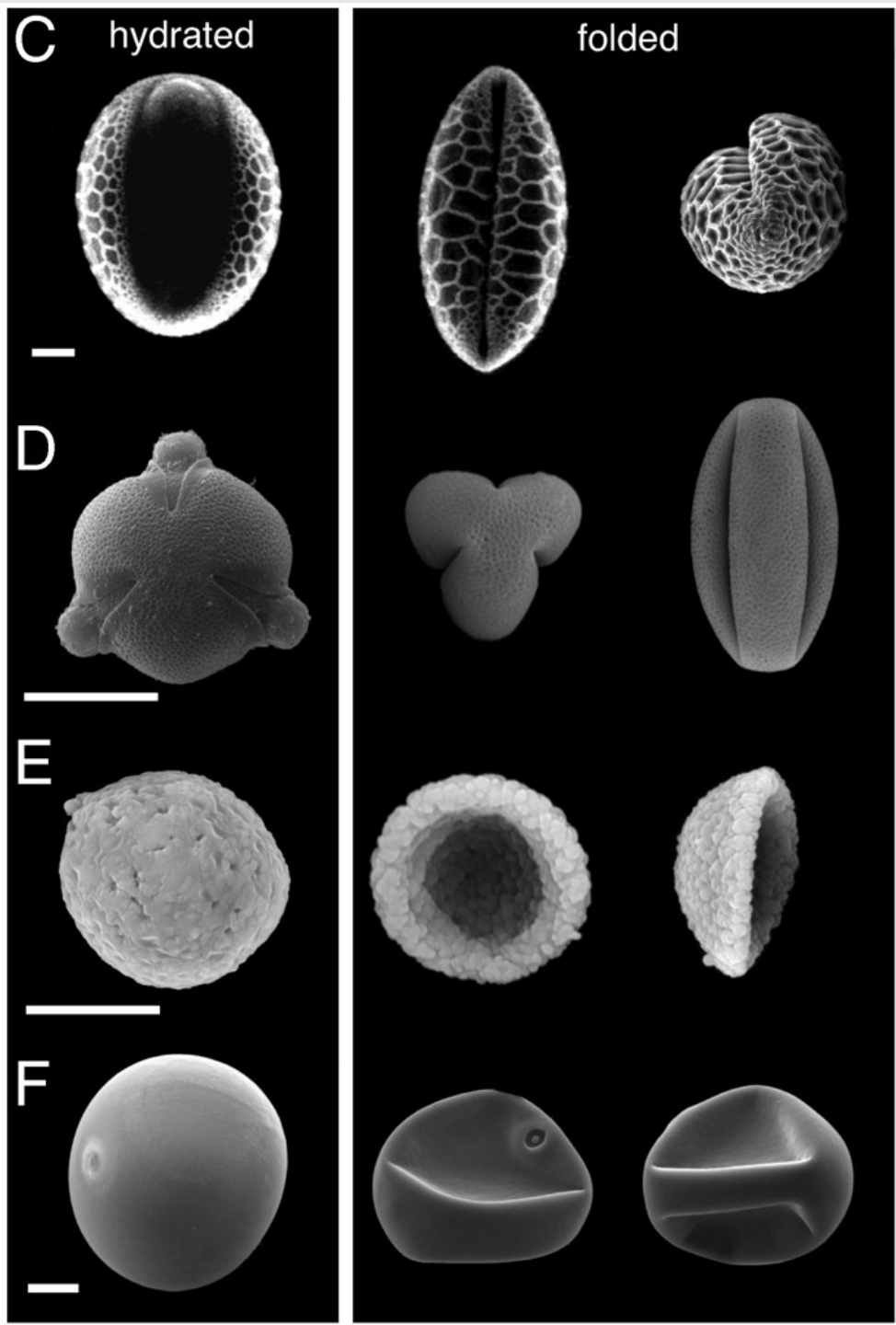
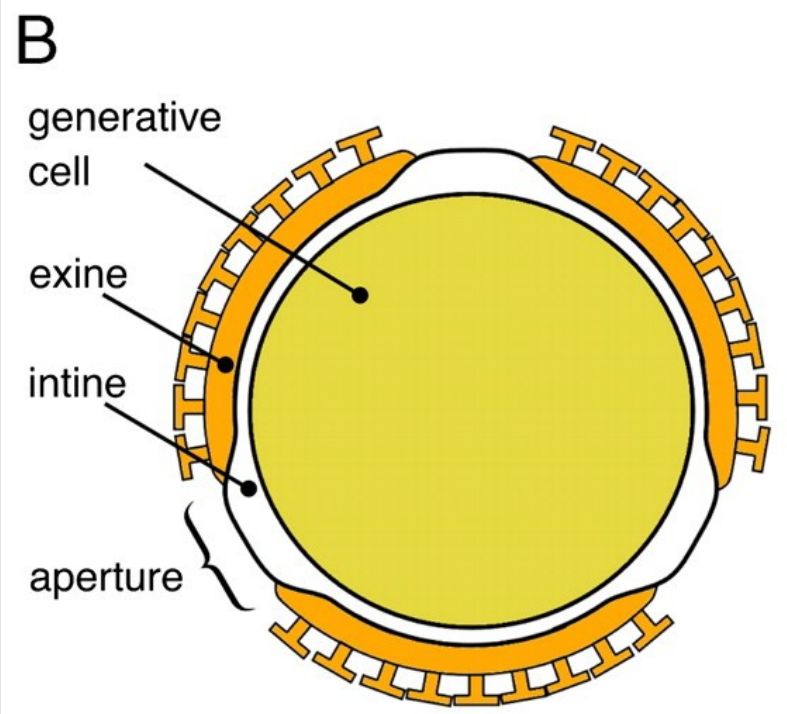
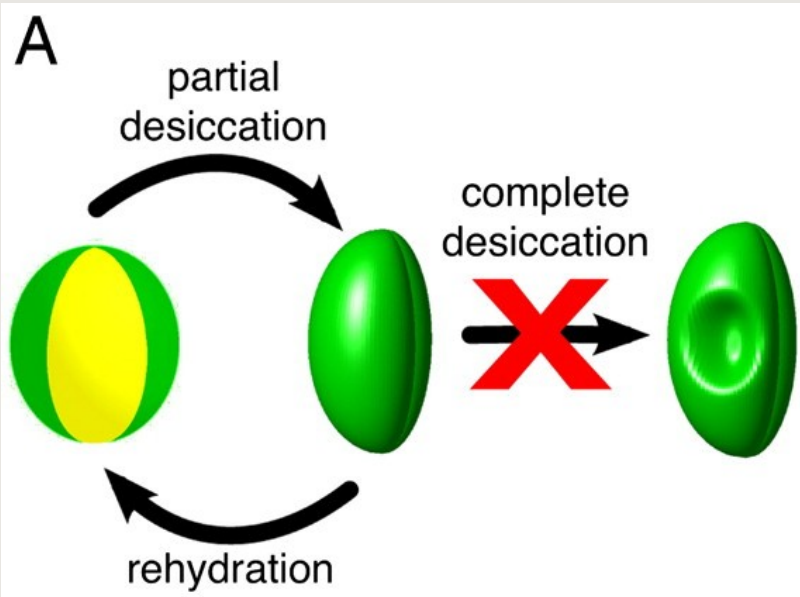
Figure 4.30

Diagrammatic representation of NPC of some pollen in equatorial view. Dotted lines indicate different plane of focus.

## Příklady různých typů pylových zrn



- 1 - trizonoporátní (bříza)
- 2 - pentazonoporátní (olše)
- 3 - trizonokolpátní (javor, tabák)
- 4 - polyapantoporátní (merlík, tykev)
- 5 - hexapantokolpátní (kuřinka)



# Sporoderma – stěna pylového zrna

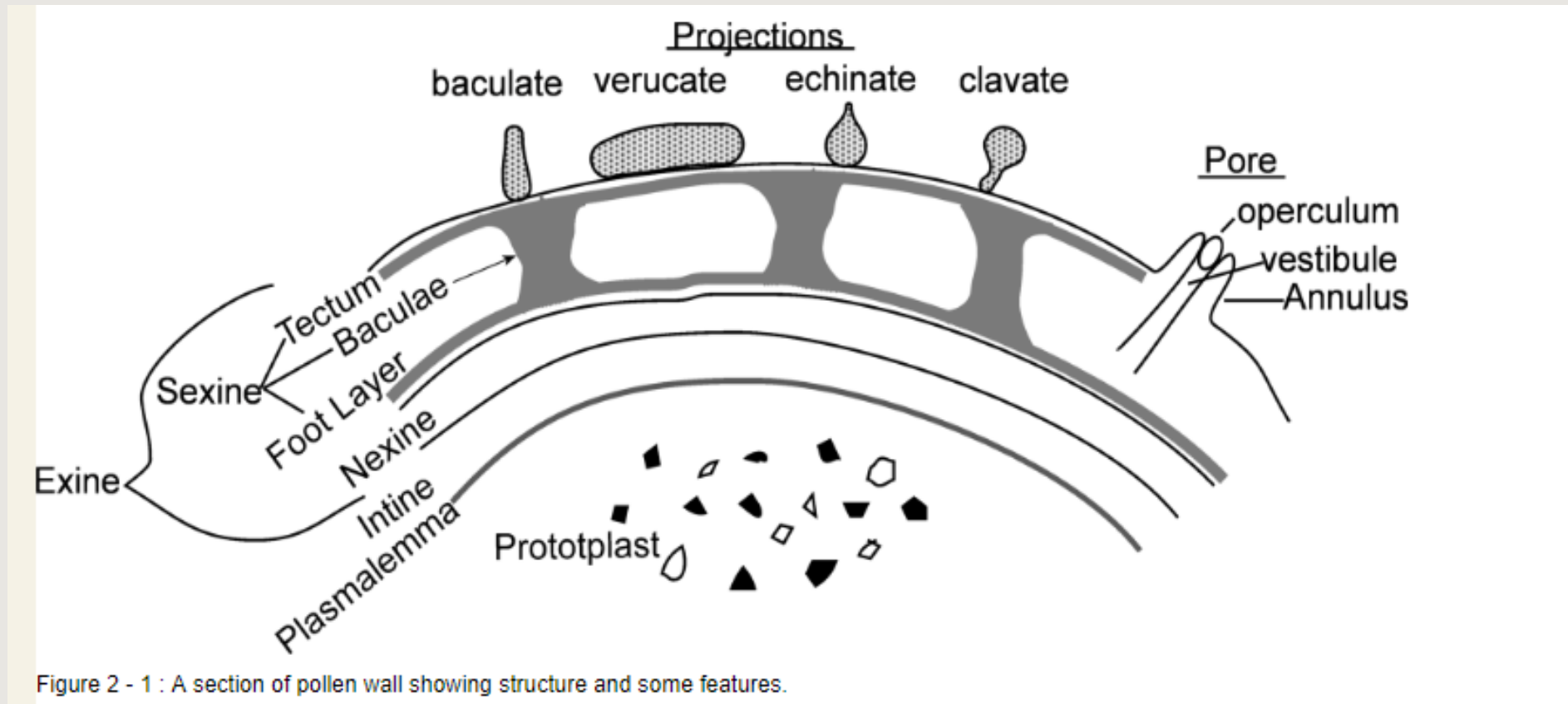


Figure 2 - 1 : A section of pollen wall showing structure and some features.

# Stavba exiny pylového zrna pelyňku (*Artemisia*)

ektexina

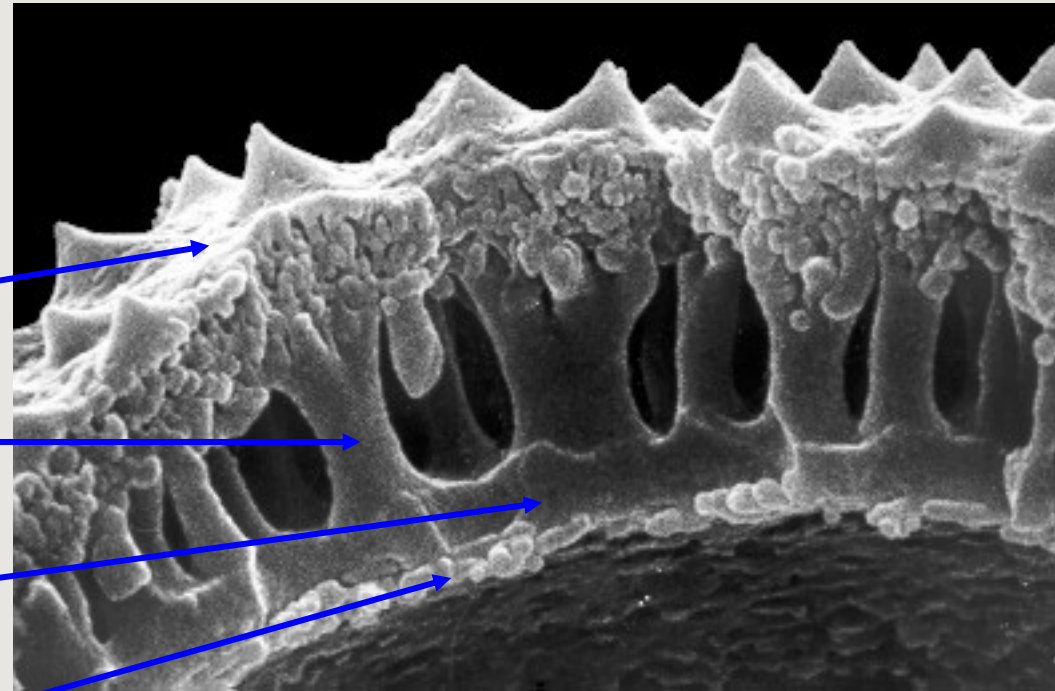
tektum

bakuly

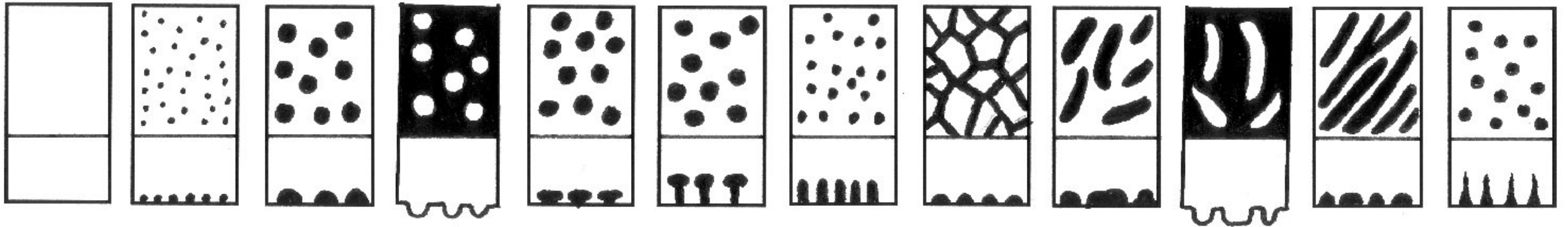
základní vrstva

endexina

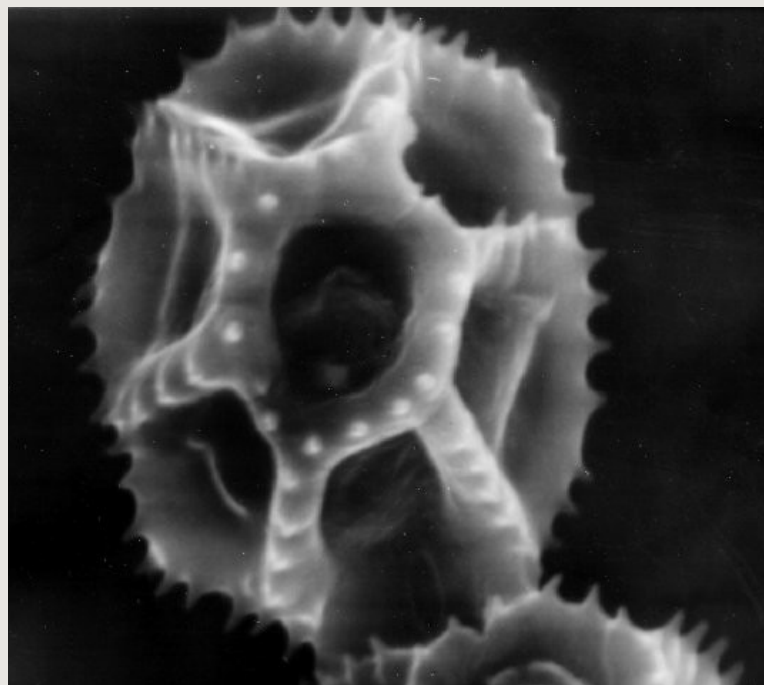
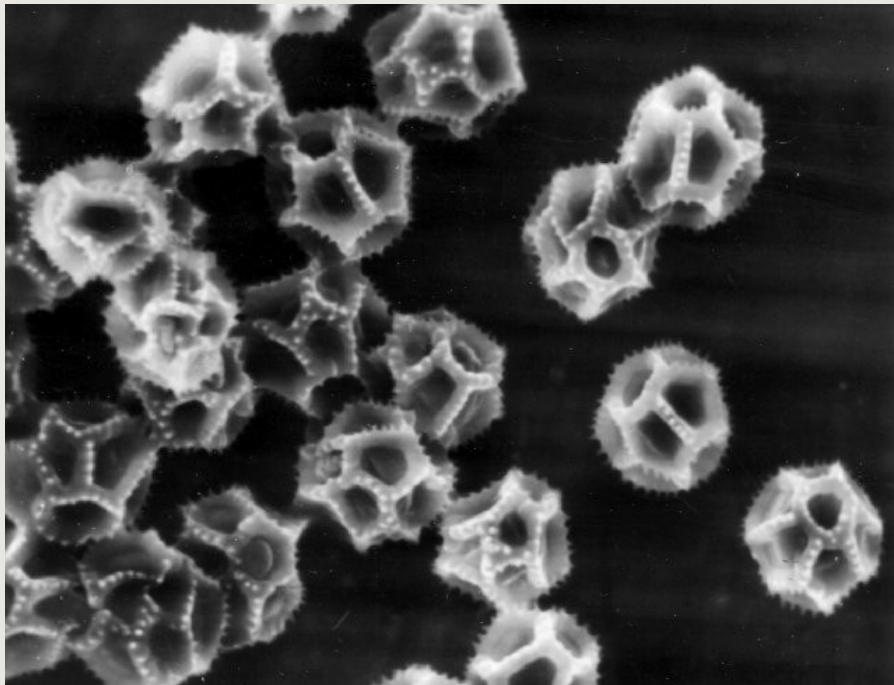
lamelární vrstva



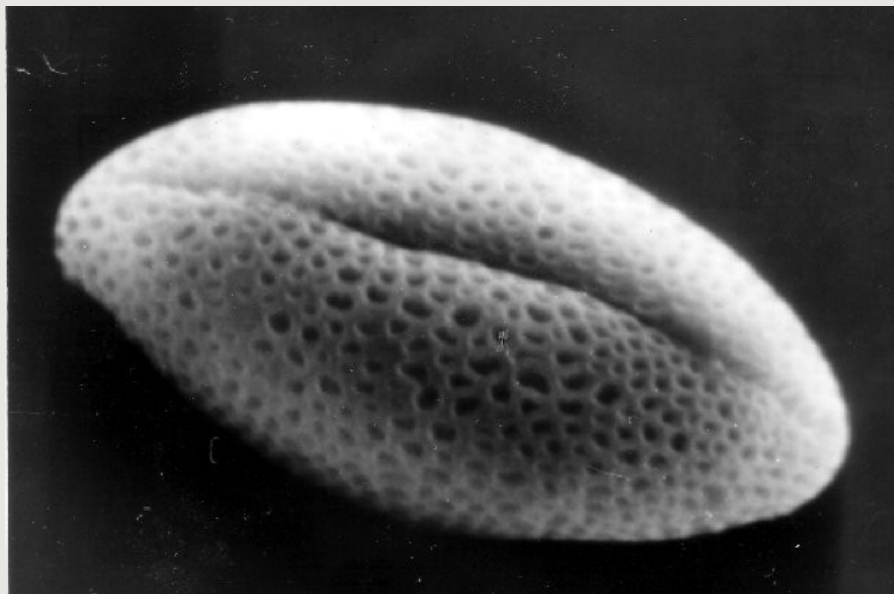
## Příklady typů skulptur (ornamentace) exiny:



psilátní granulátní verukátní foveolátní gemátní klavátní bakulátní retikulátní rugulátní fosulátní striátní echinátní

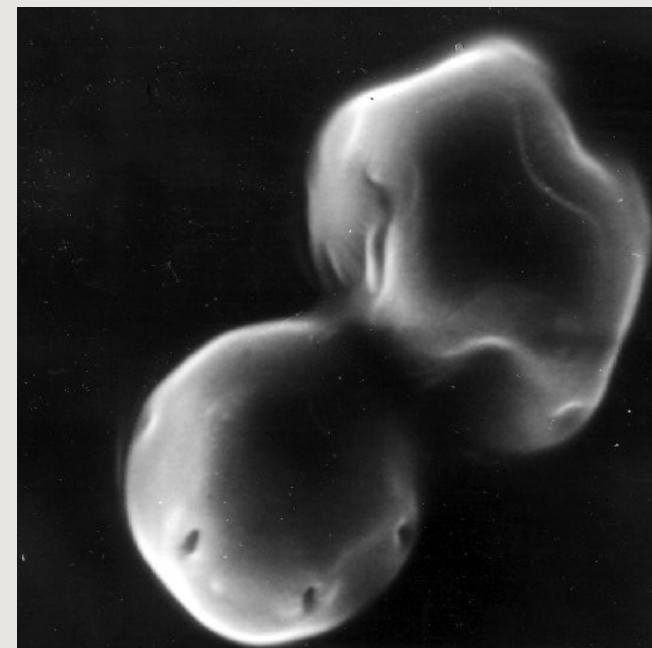


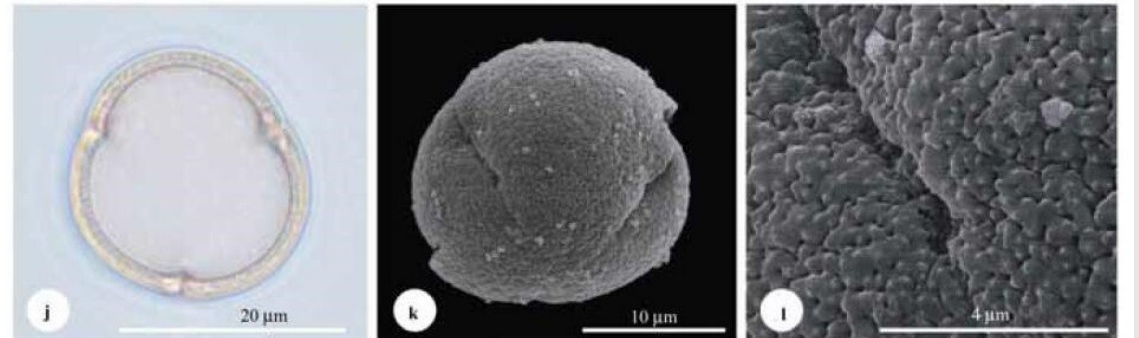
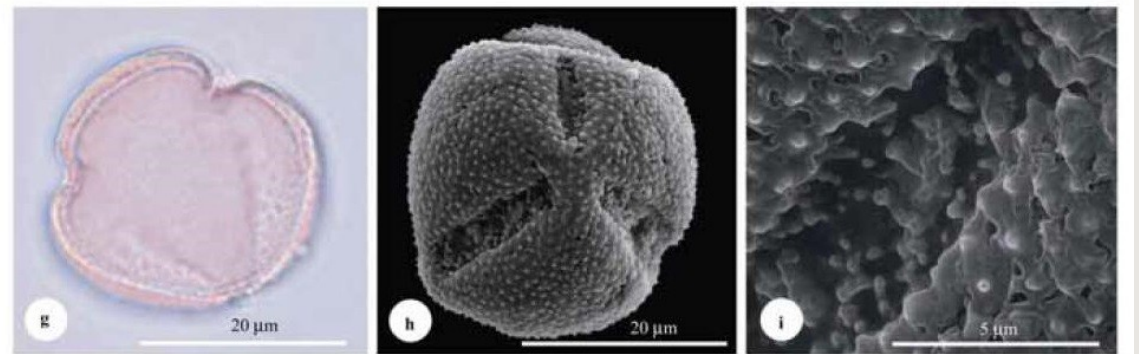
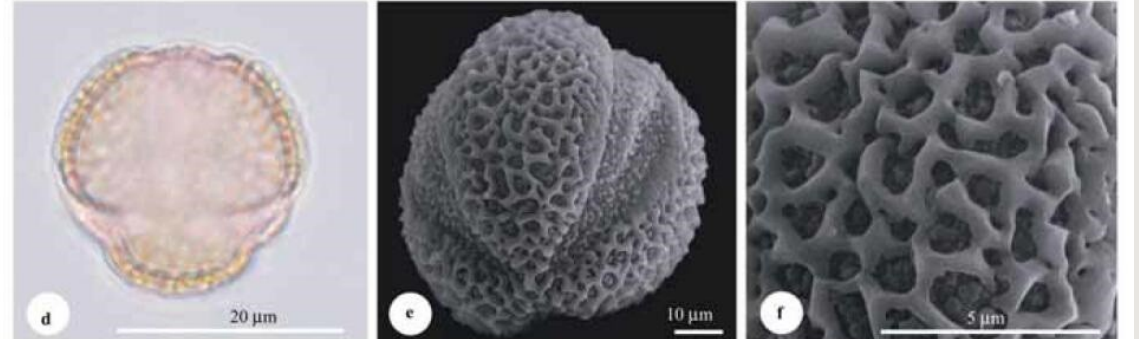
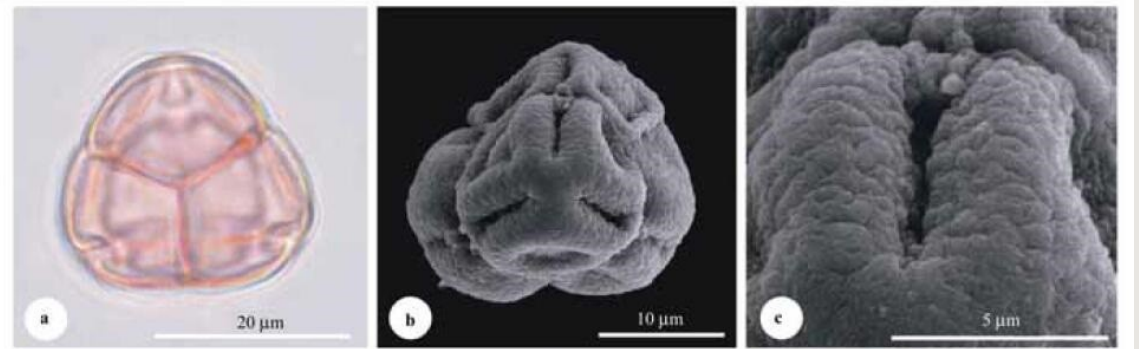
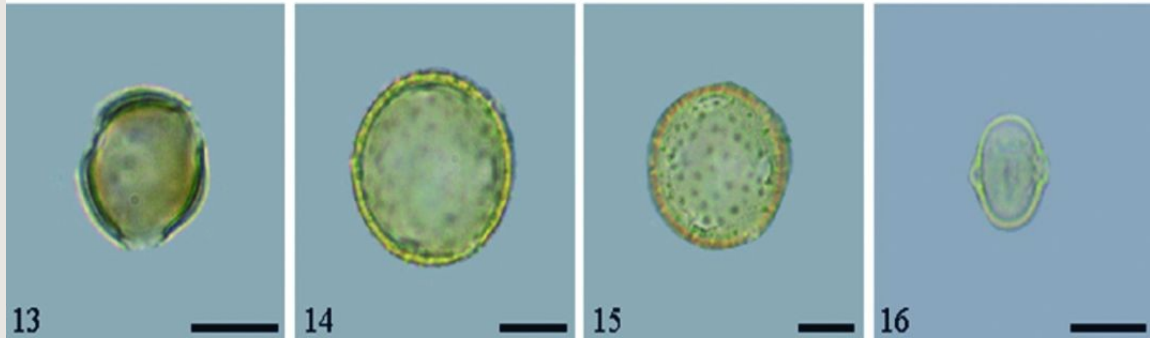
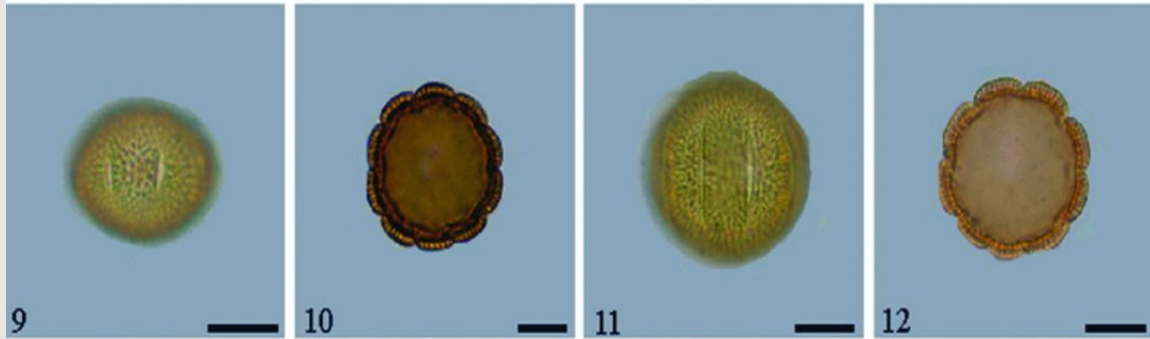
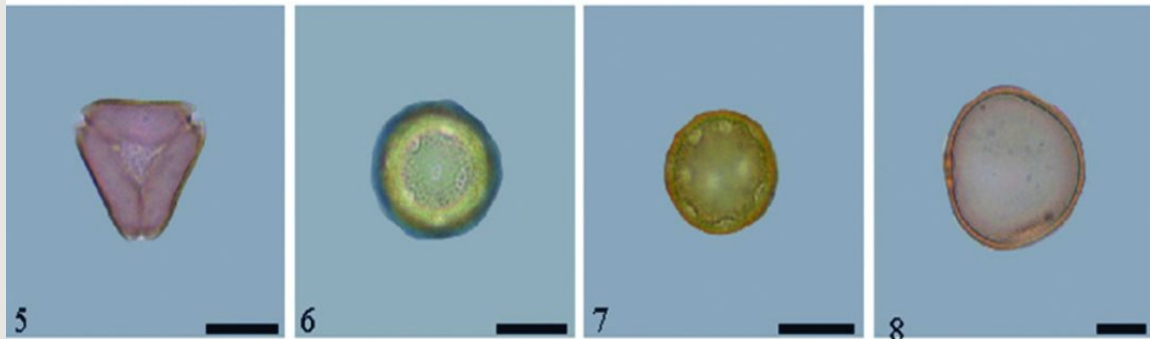
**fenestrátní pylová zrna**  
locika kompasová  
(*Lactuca serriola*).



**kolpátní pylové zrna**  
s povrchem retikulátním  
brukev řepka olejka  
(*Brassica oleracea*)

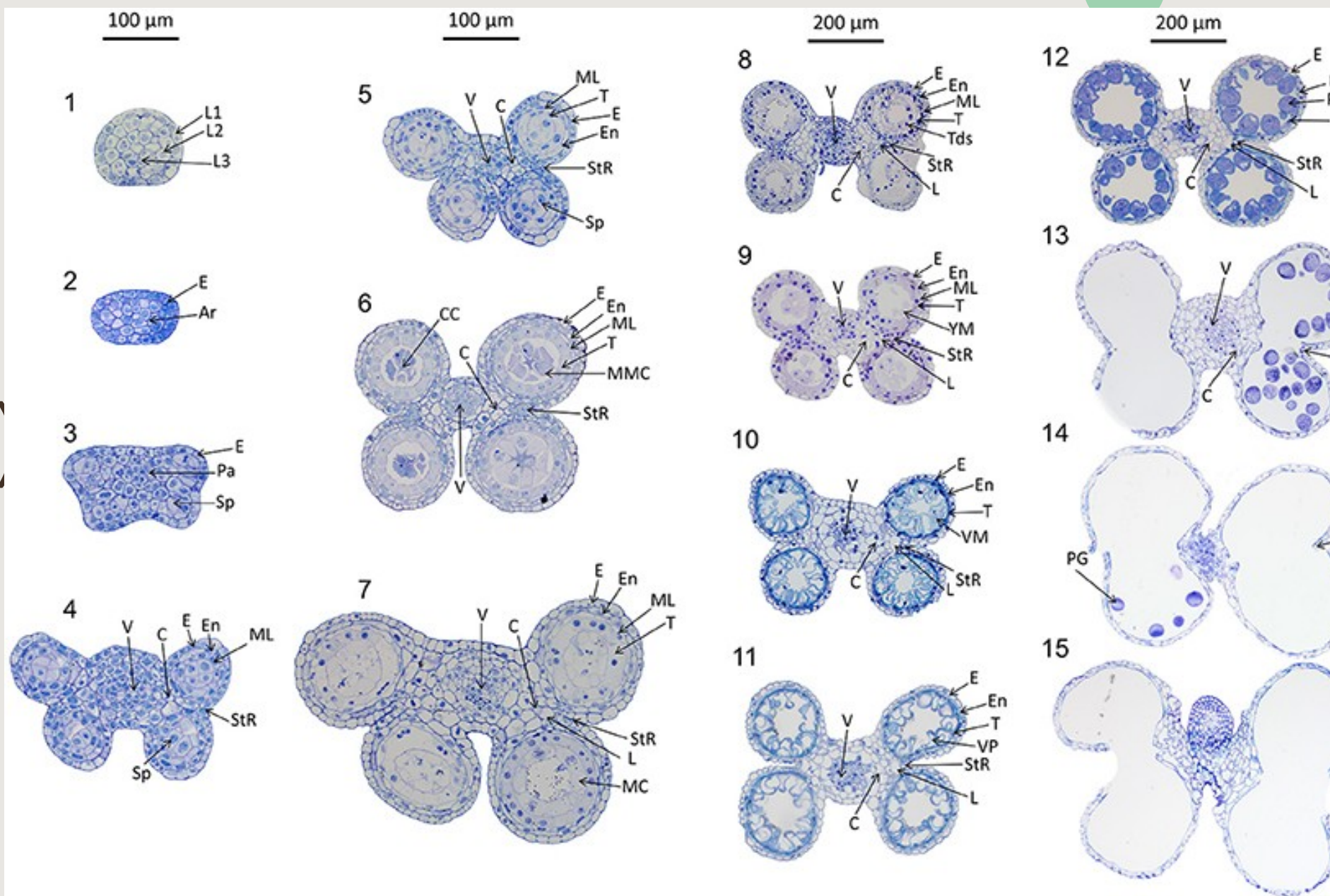
**pentazonokolpátní pylové zrna**  
olše zelené (*Alnus viridis*)



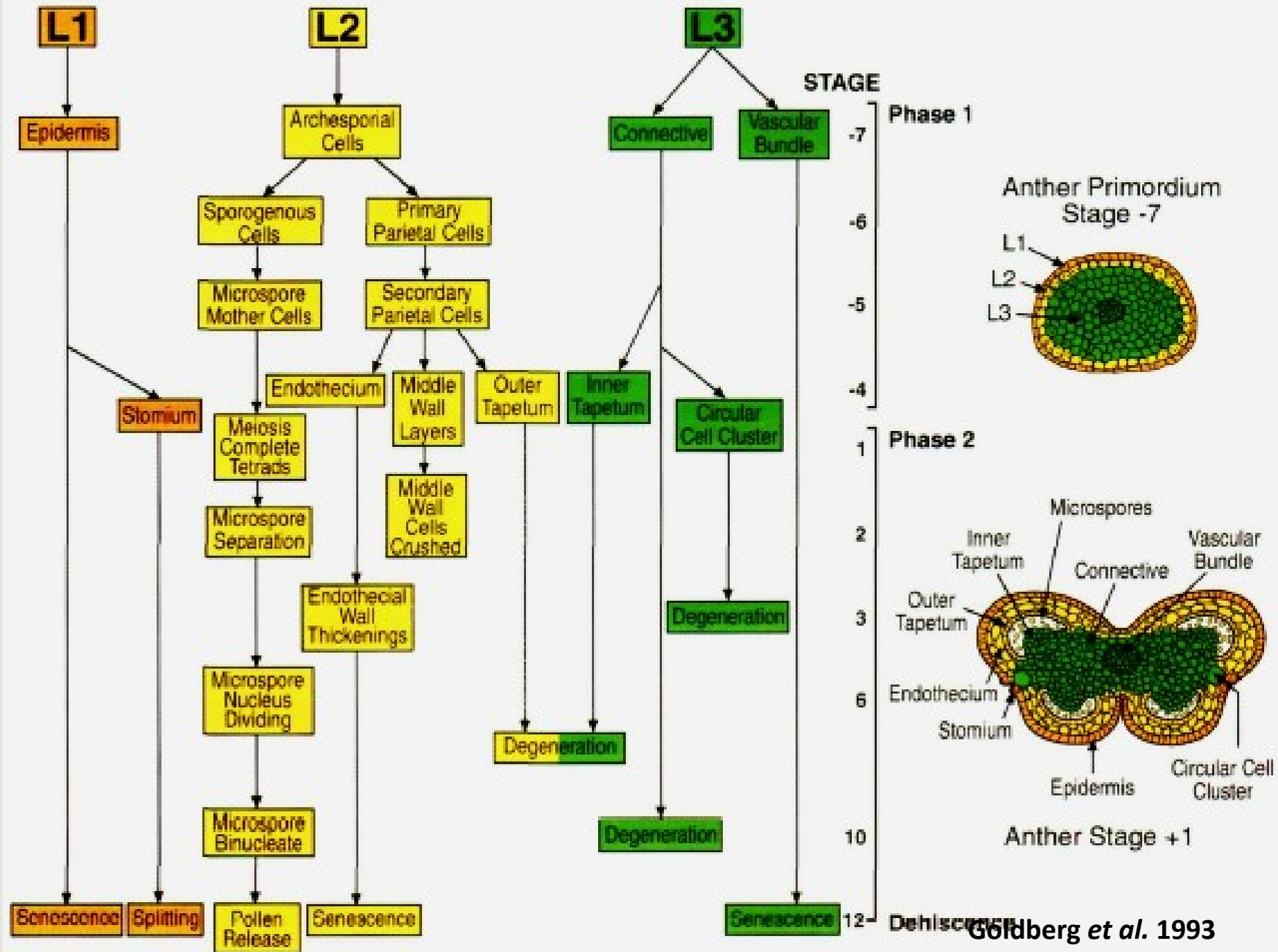




# Vývoj prašníku (*Triticum aestivum*)



# Vývoj prašníku tabáku



# Shrnutí

