

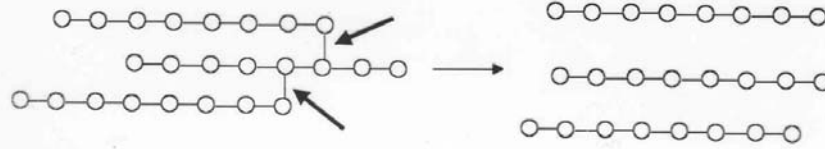
Metabolismus sacharidů

Studijní materiály

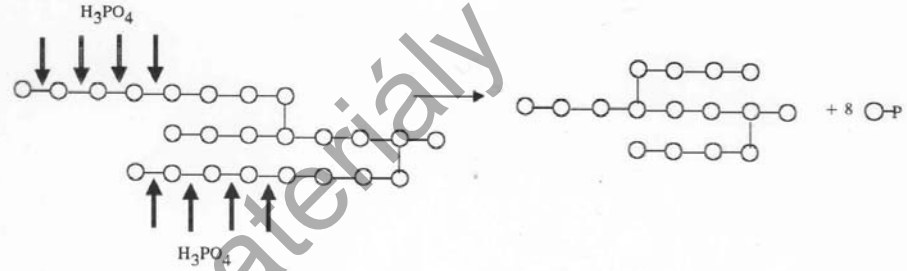
Degradace škrobu

Odbourávání polysacharidů u rostlin

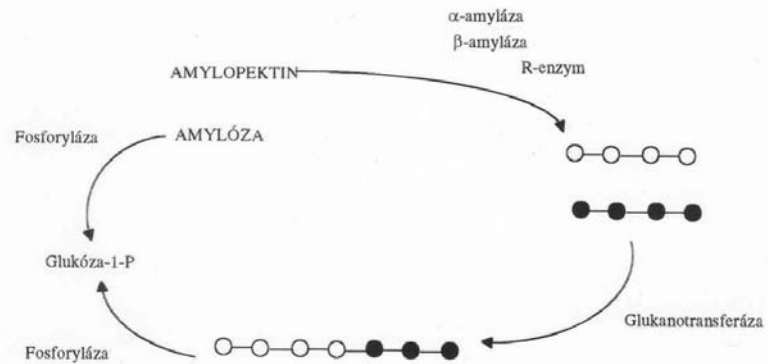
R-enzym

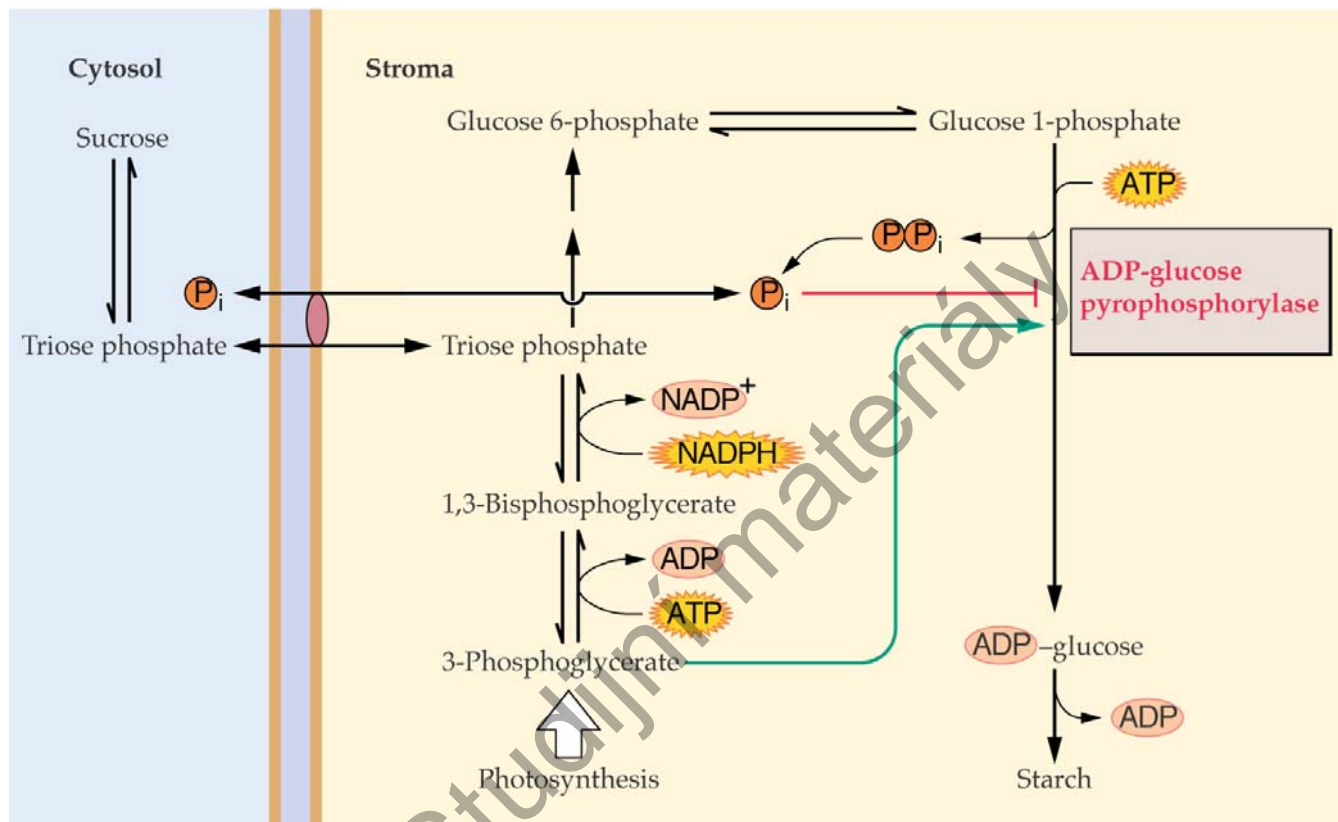


Fosforyláza



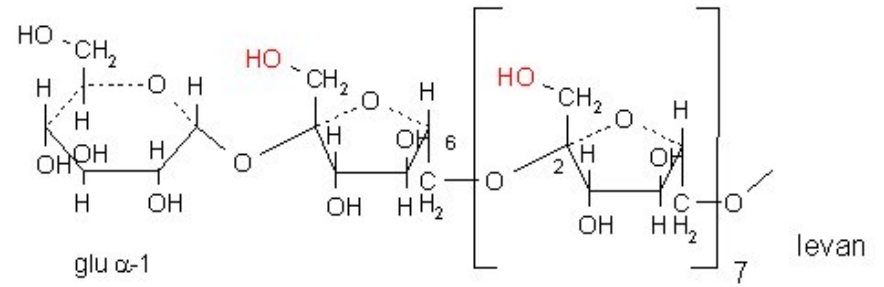
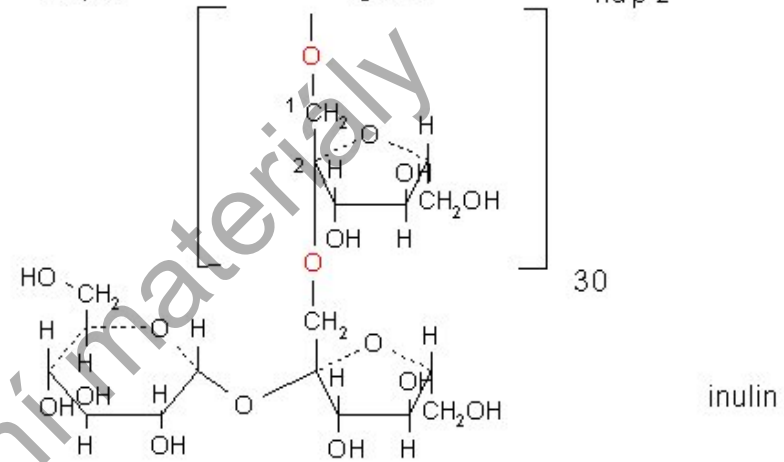
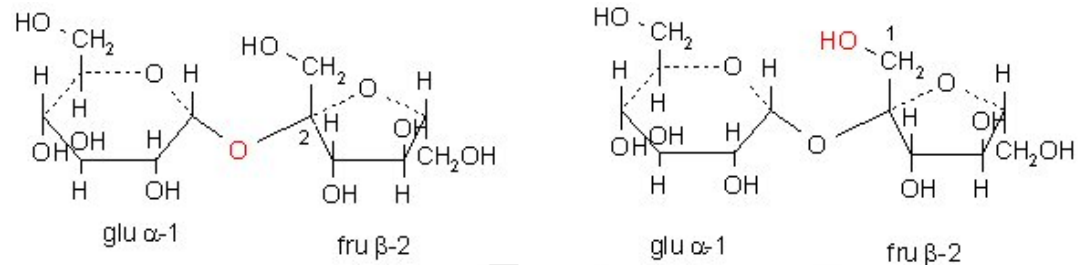
Glukanotransferáza

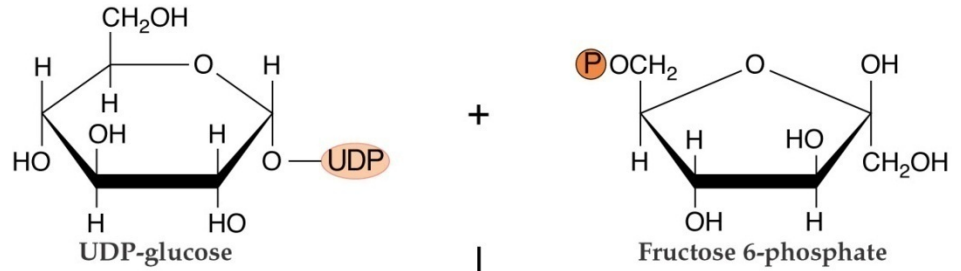




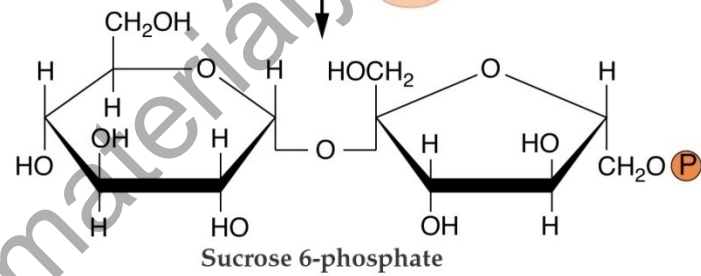
Výměna sacharidů mezi plastidy a cytosolem

Polyfruktosany

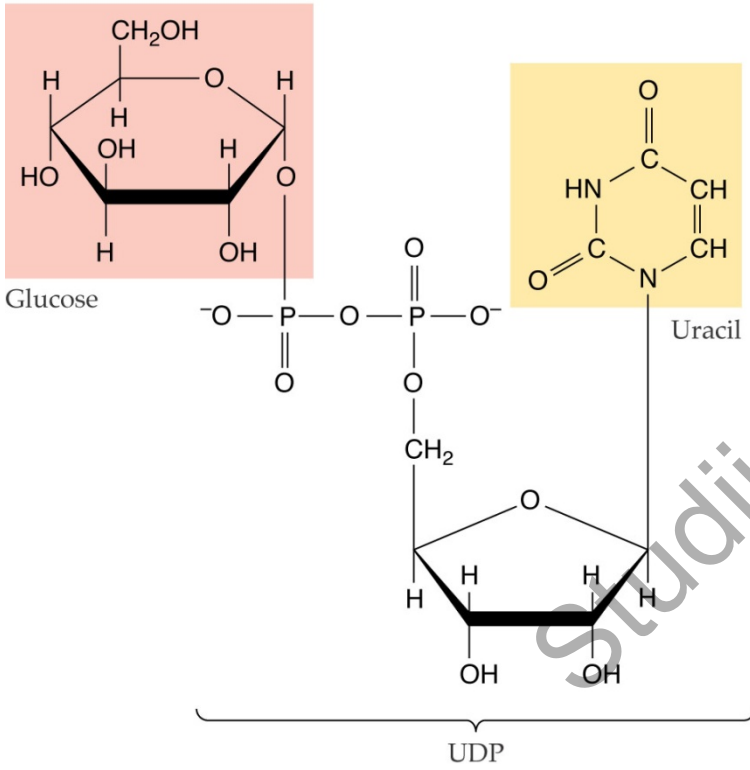
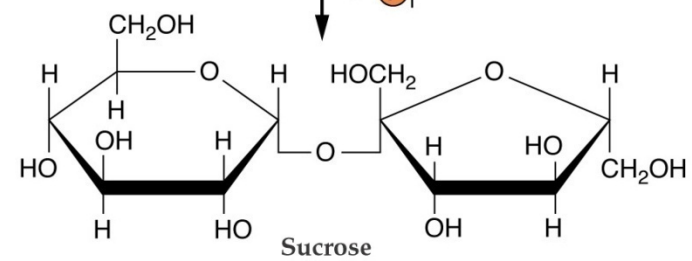




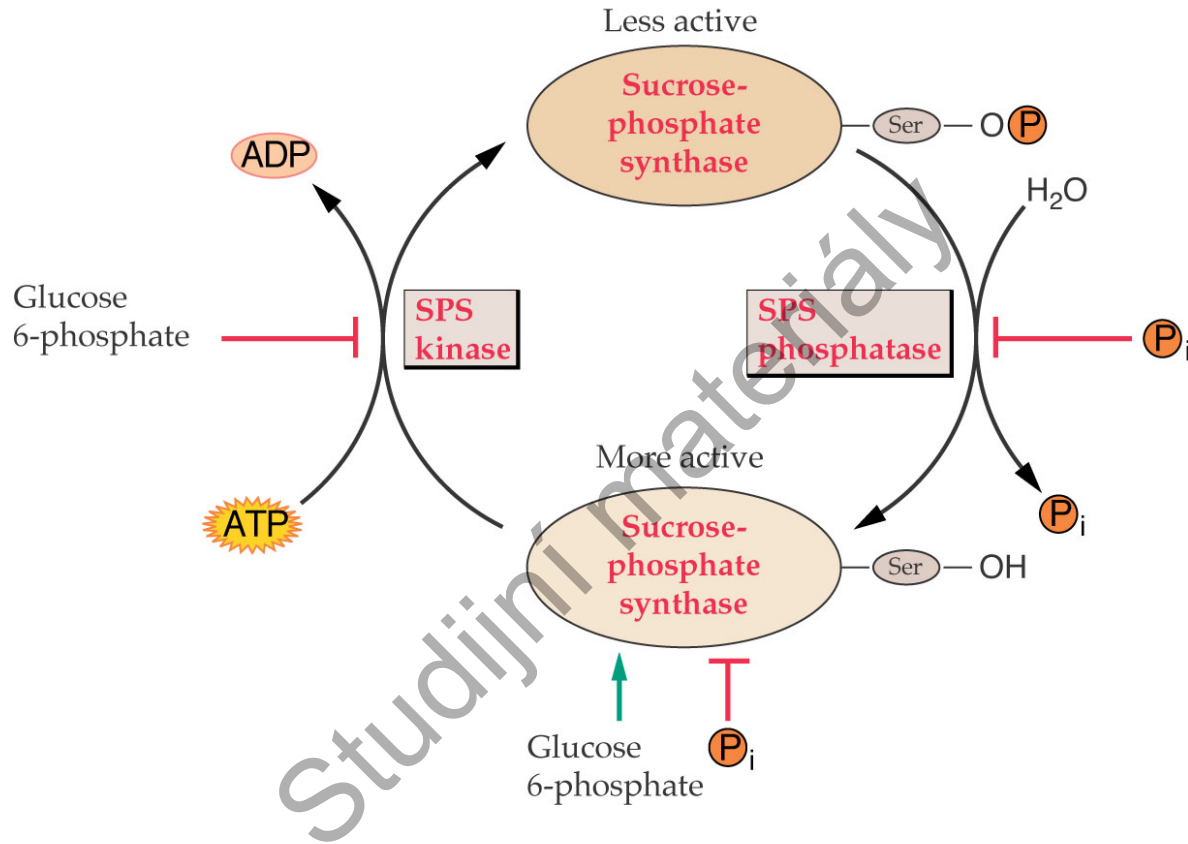
Sucrose-phosphate synthase



Sucrose-phosphate phosphatase

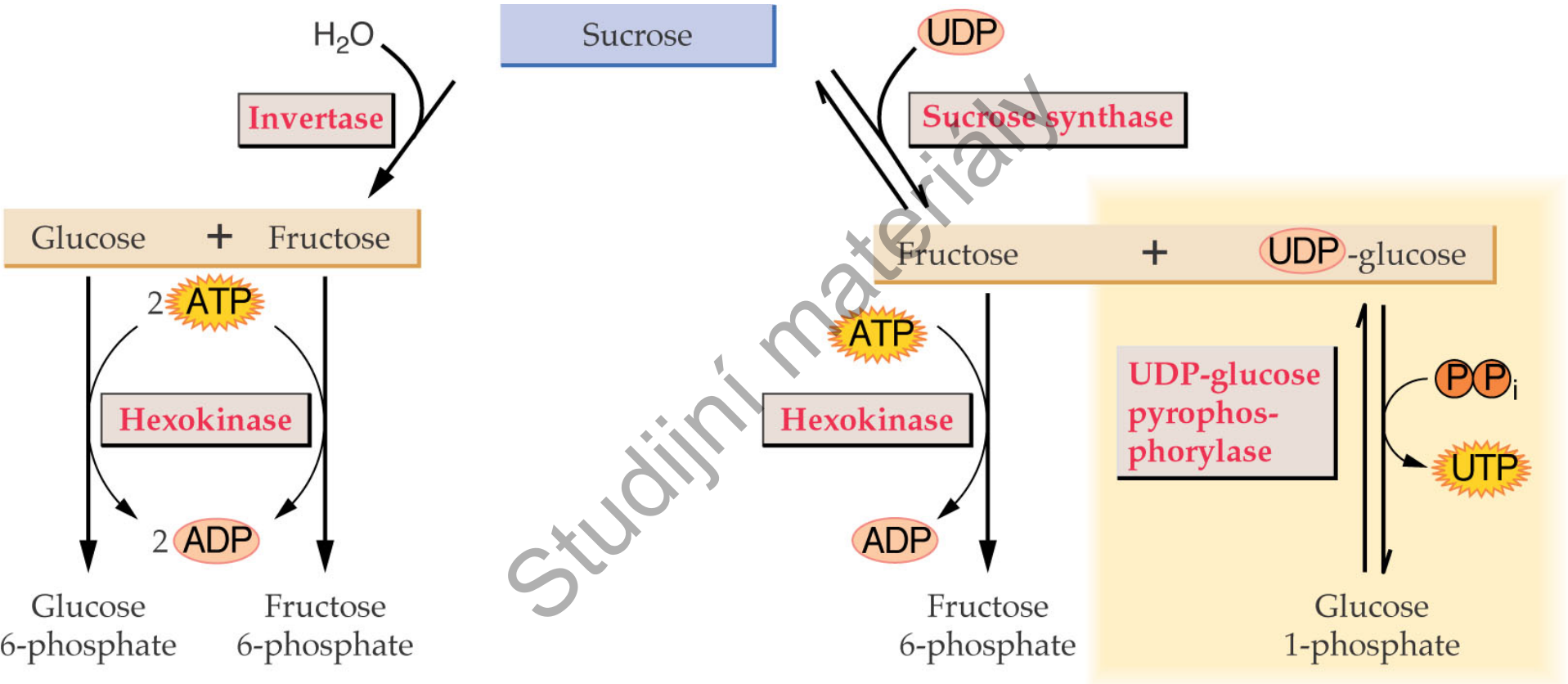


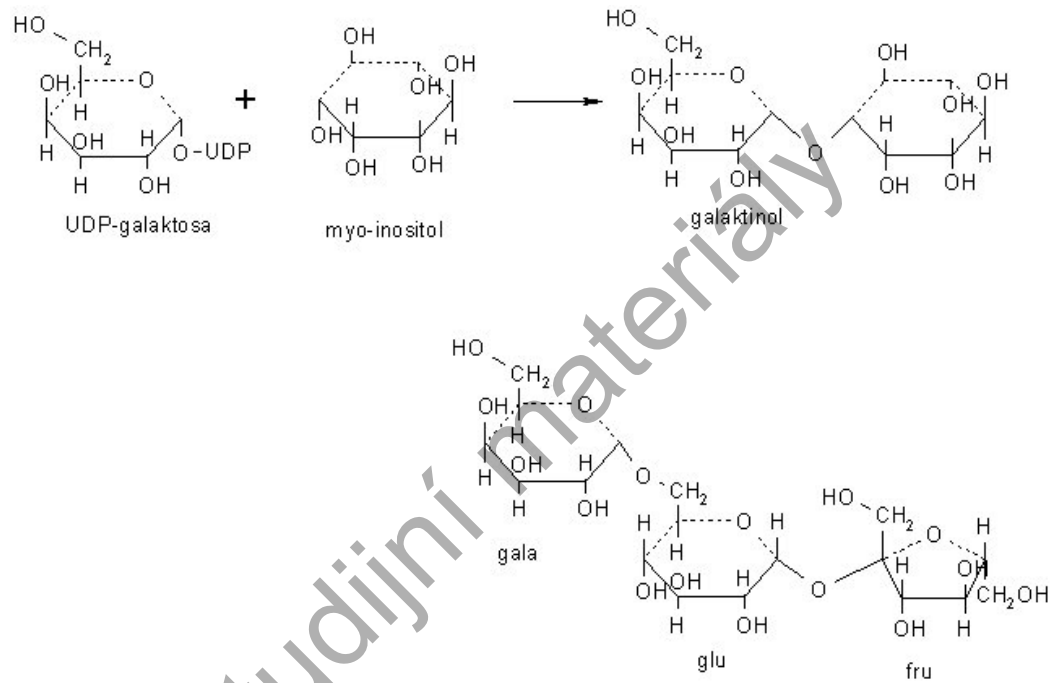
Syntéza sacharosy



Regulace sacharosafosfátsyntasy, pomocí proteinkinasy

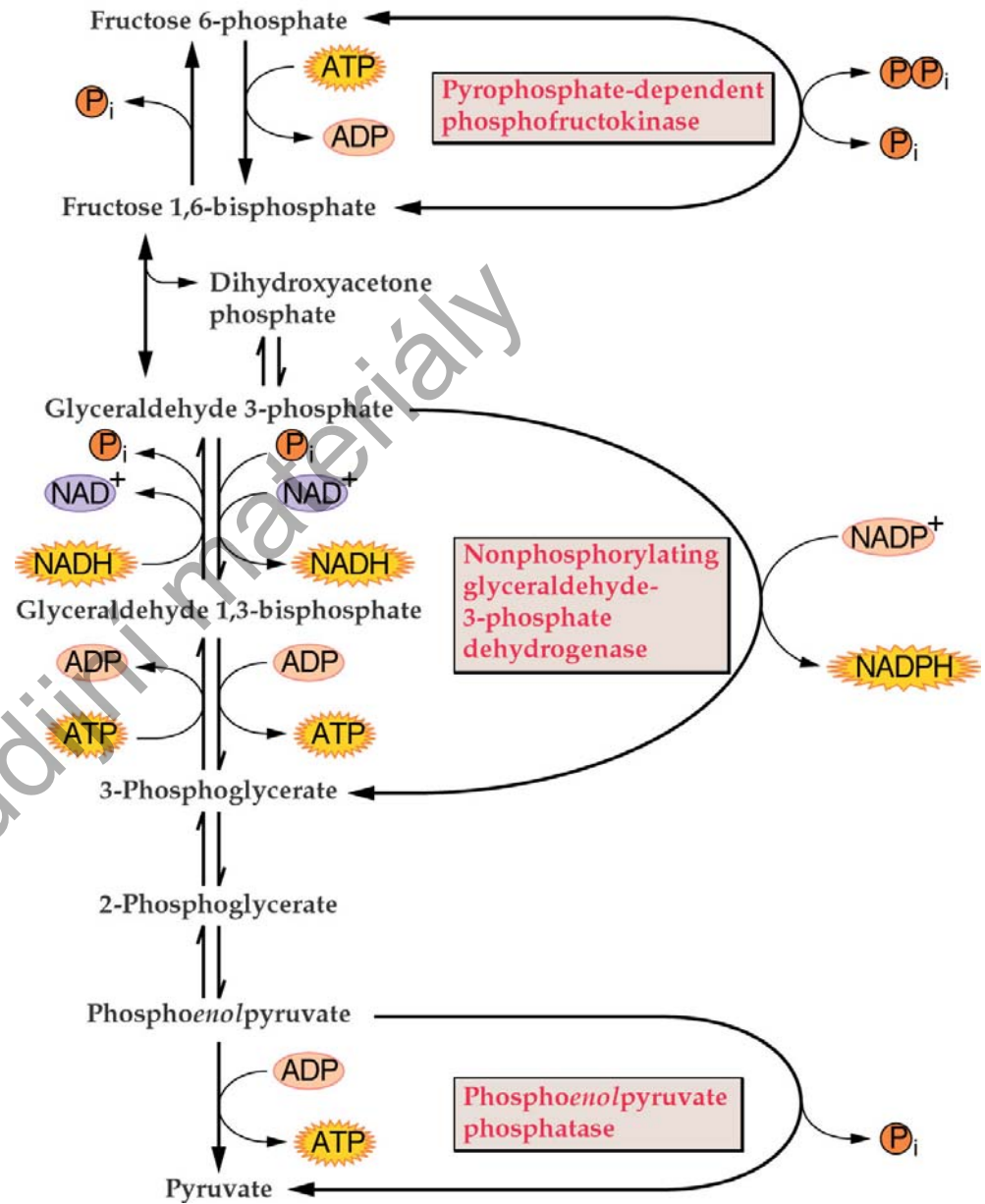
Metabolismus sacharosy



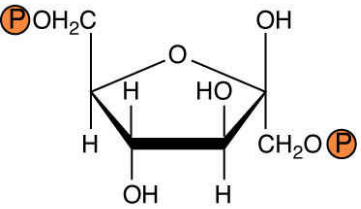


Syntéza rafinosy

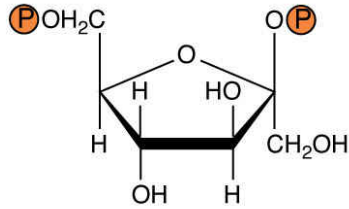
Regulace anaerobní glykolýzy



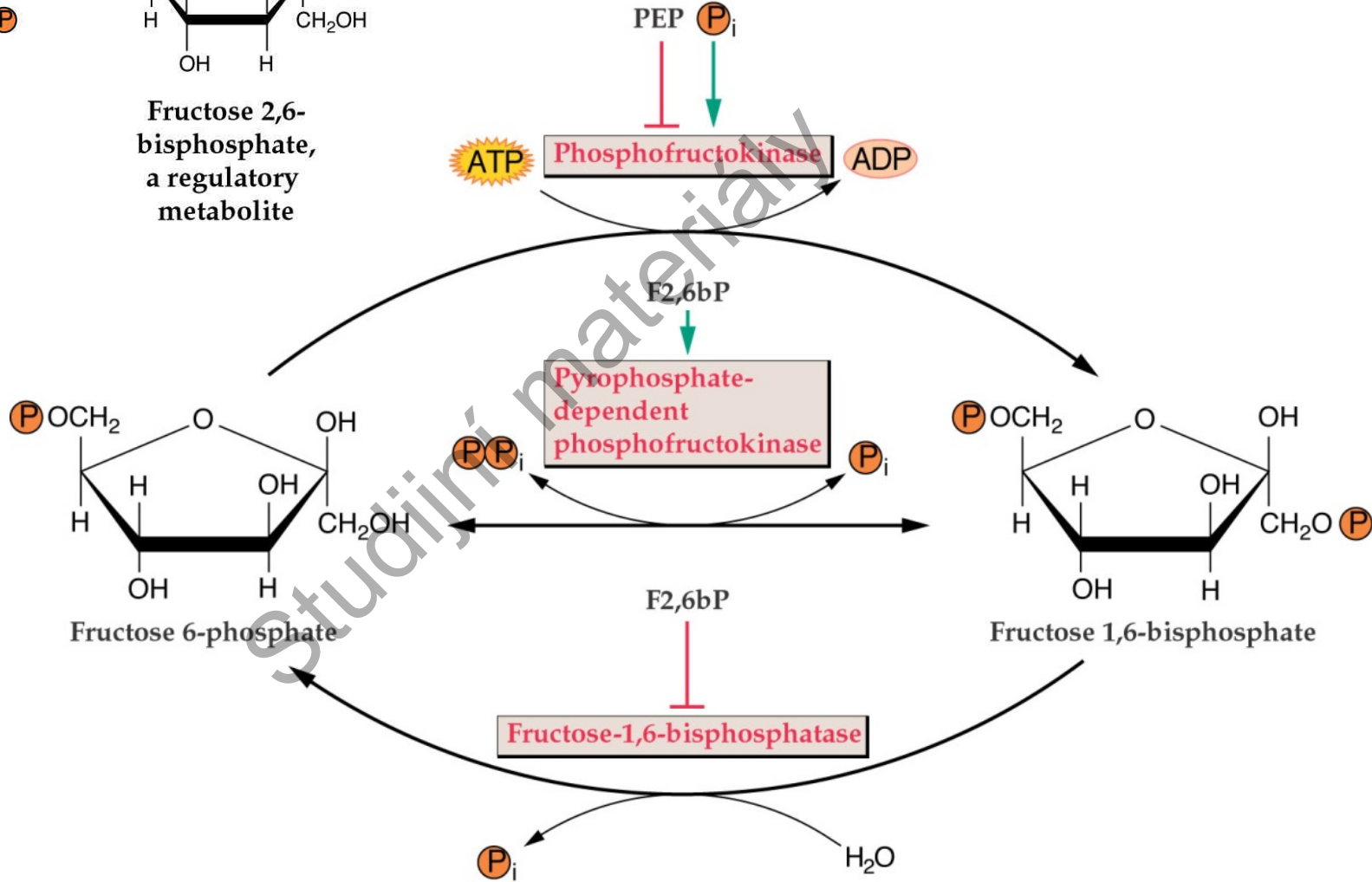
Regulace glykolýzy – první krok



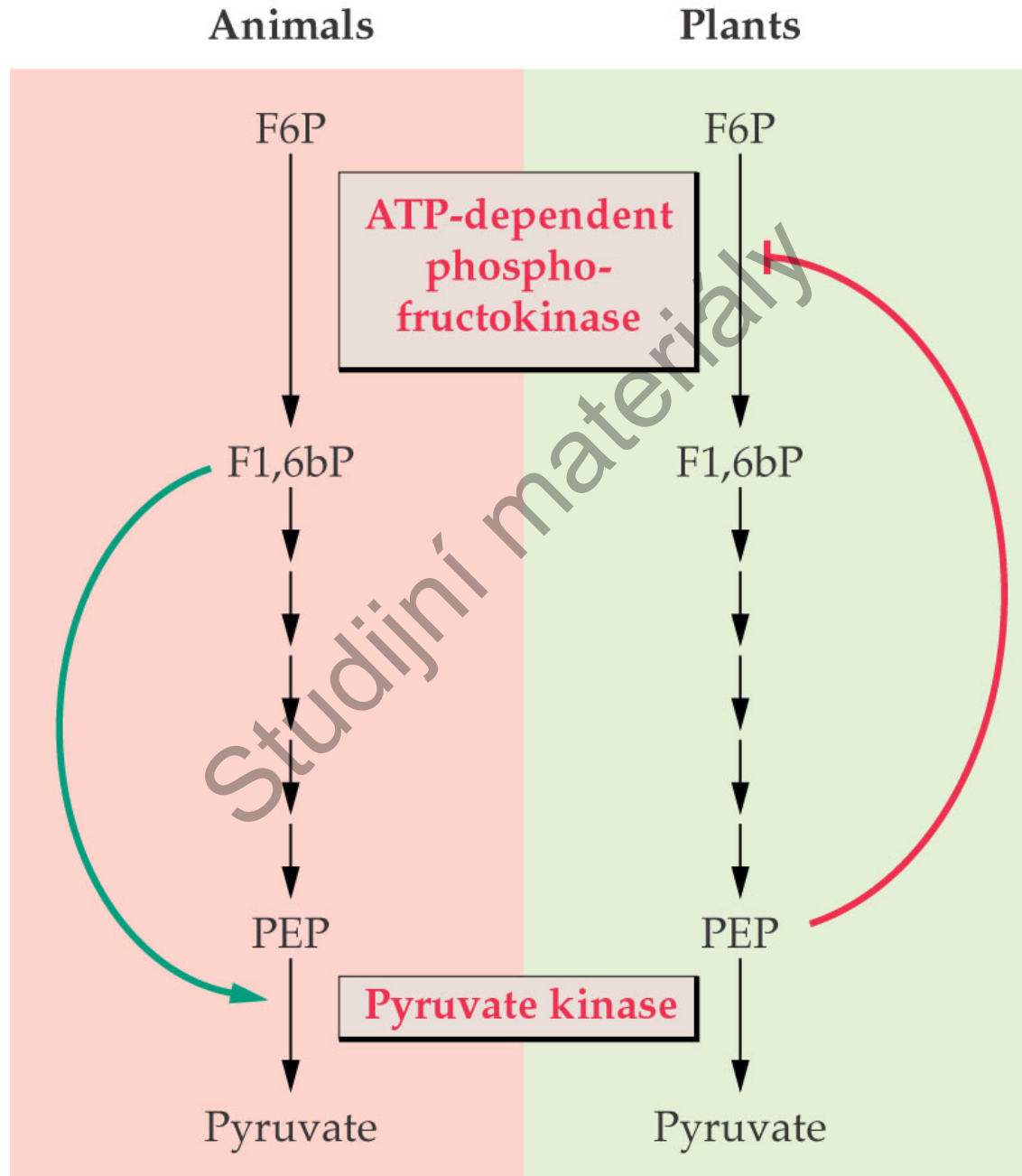
Fructose 1,6-bisphosphate, a metabolic intermediate

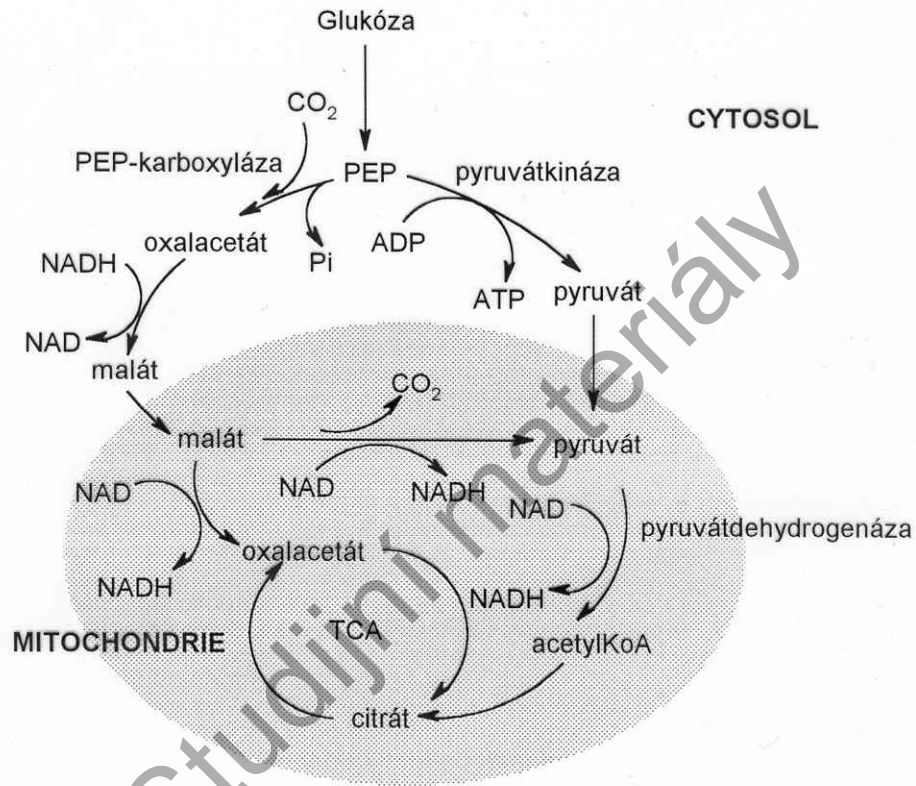


Fructose 2,6-bisphosphate, a regulatory metabolite



Rozdíly mezi regulací glykolýzy u rostlin a živočichů





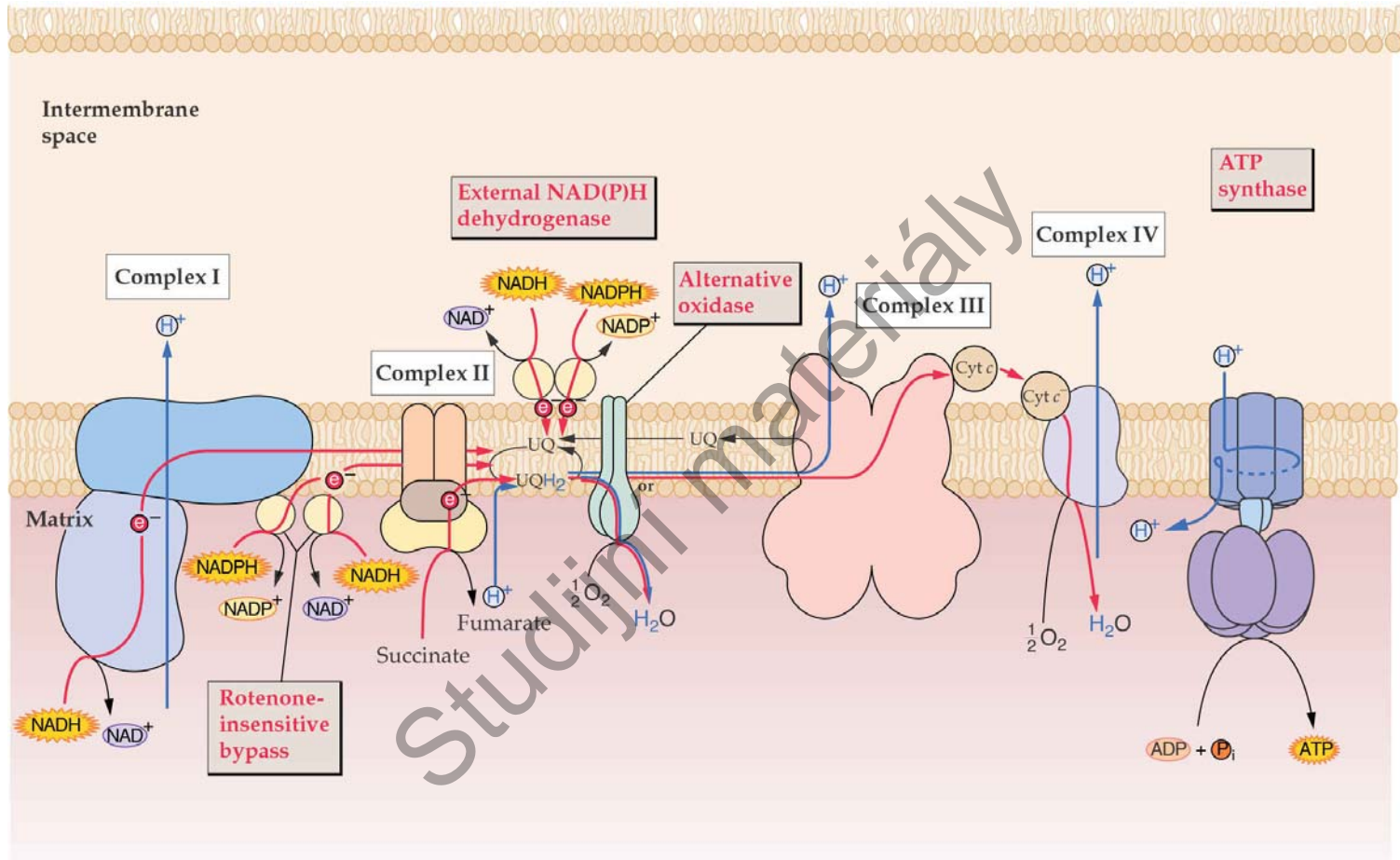
Vztah mezi anaerobní glykolýzou, Krebsovým cyklem a jablečným enzymem

Obsah ($\mu\text{mol/g}$ čerstvé hmotnosti)						
Kyselina	Arum	Kukuřice (kořen)	Kukuřice (koleopt)	Pšenice (list)	Bryophyllum (list)	Játra krysí
Citrát	16.6	1.5	0.8	0.60	8.0	0.22
Isocitrát	0.11	-	-	-	60.0	0.01
Jantaran	-	0.2	0.2	0.2	-	0.75
Fumaran	0.90	-	-	-	-	0.08
Malát	21.6	7.5	2.7	1.7	19.0	0.39

Obsah dikarboxylátů v rostlinách

Respirace

Studijní materiály



Respirační řetězec rostlin, alternativní oxidasa, rotenon necitlivé NADH oxidasy

Srovnání kyanid insenzitivní respirace rostlinné tkáně v přítomnosti 0.2 mM KCN a rozpojovače.

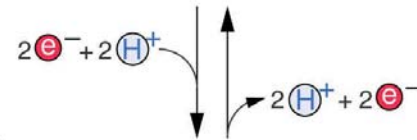
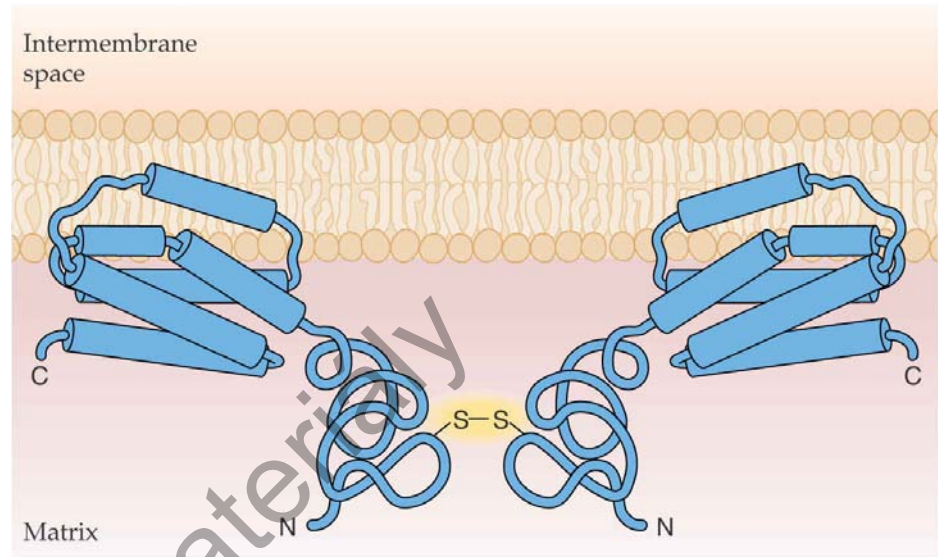
Druh	Resistence respirace na CN (%)
Gossypium kořen	36
Phaseolus kořen	61
Spinacea listy	40
Zea kořen	47
Pisum listy	39

Inhibice SHAM nebo disulfiramem

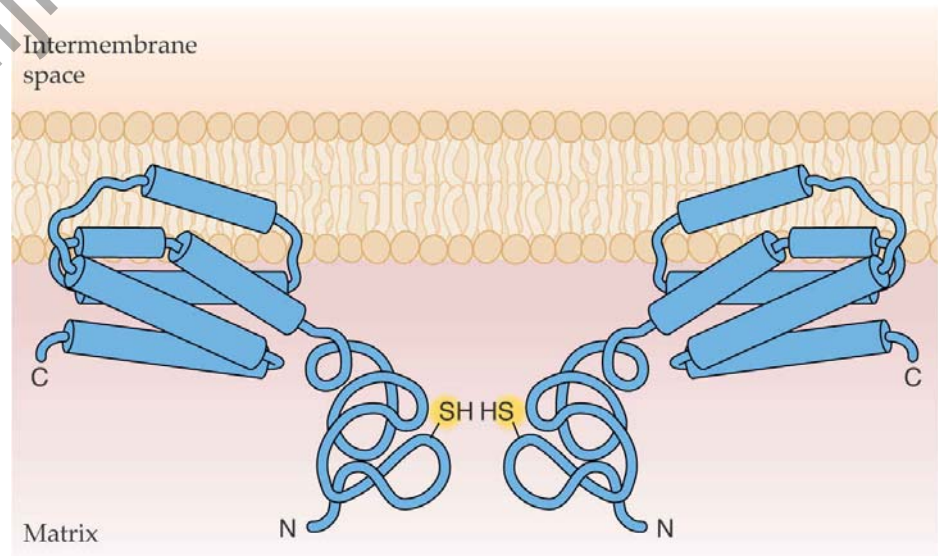
Kyanid necitlivá respirace u rostlin

Alternativní oxidasa a její regulace

Inactive form (oxidized)

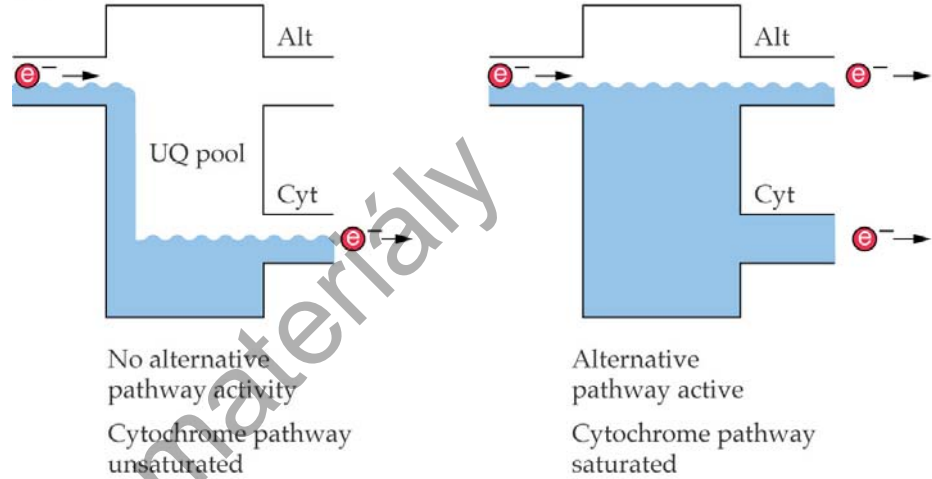


Active form (reduced)

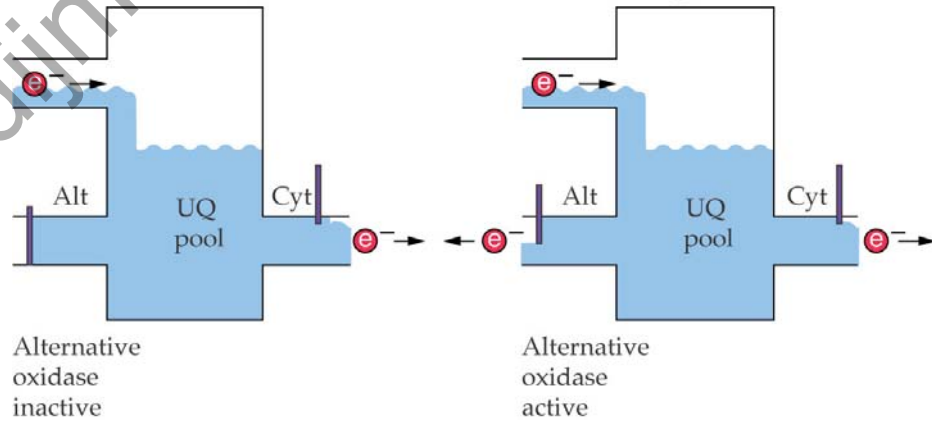


Role alternativní oxidasy

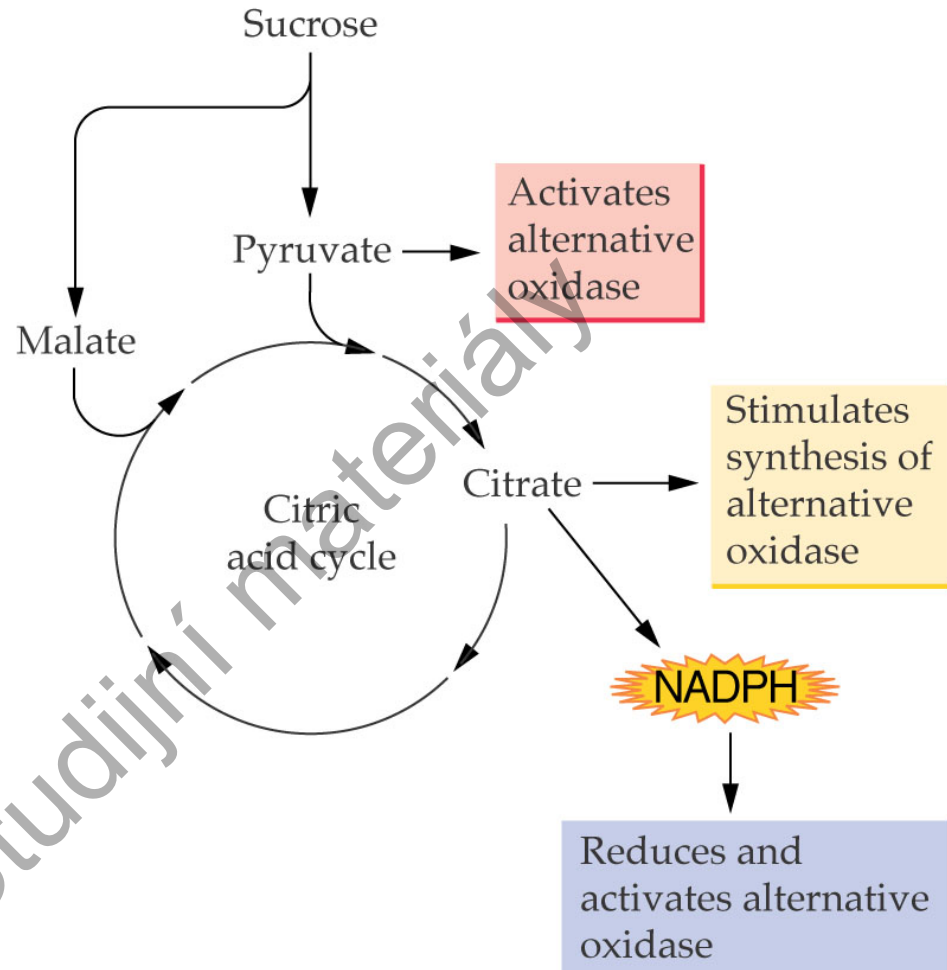
(A) Electron overflow model (considered out-of-date)



(B) Electron distribution model (reflects current thinking)



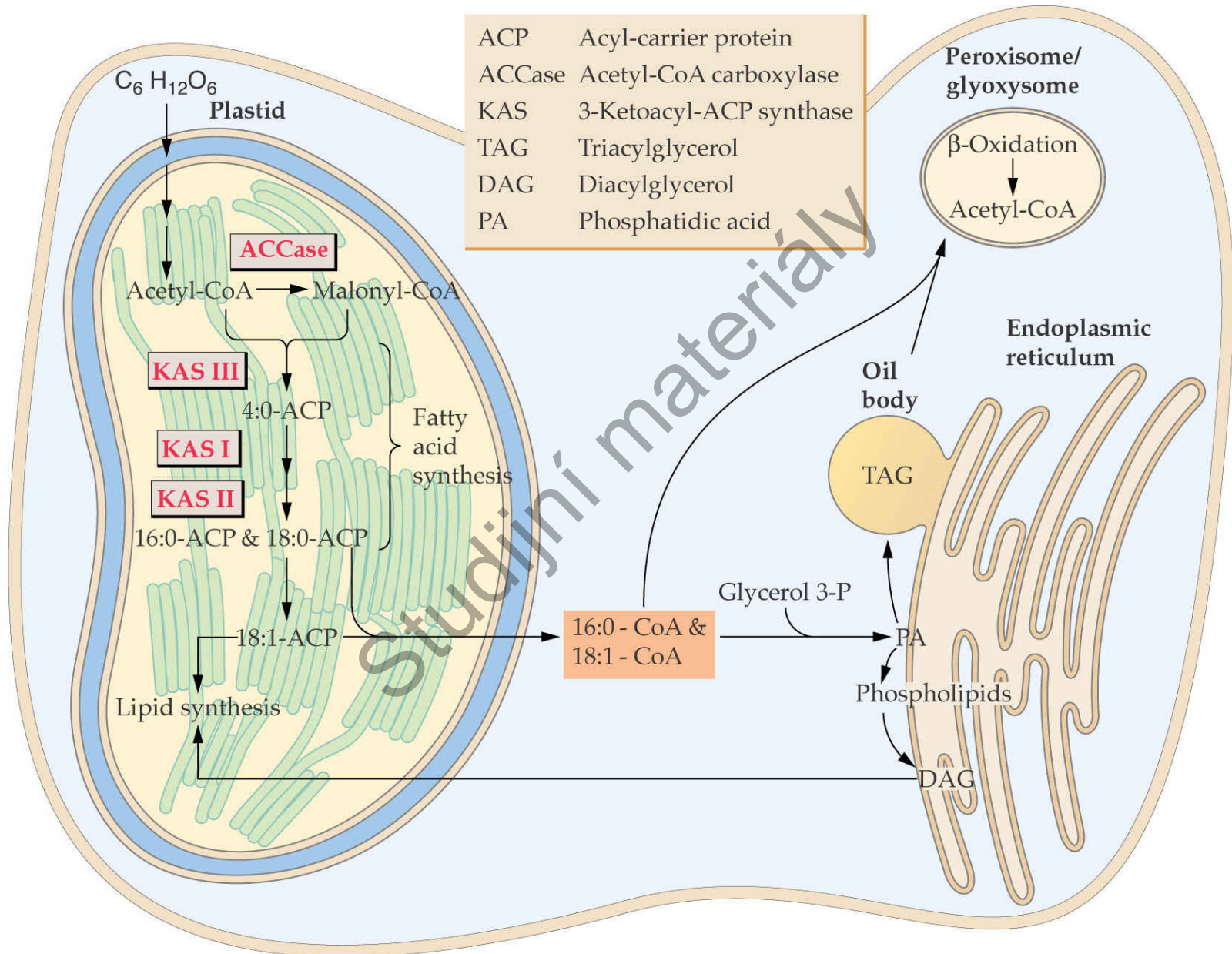
Role alternativní oxidasy



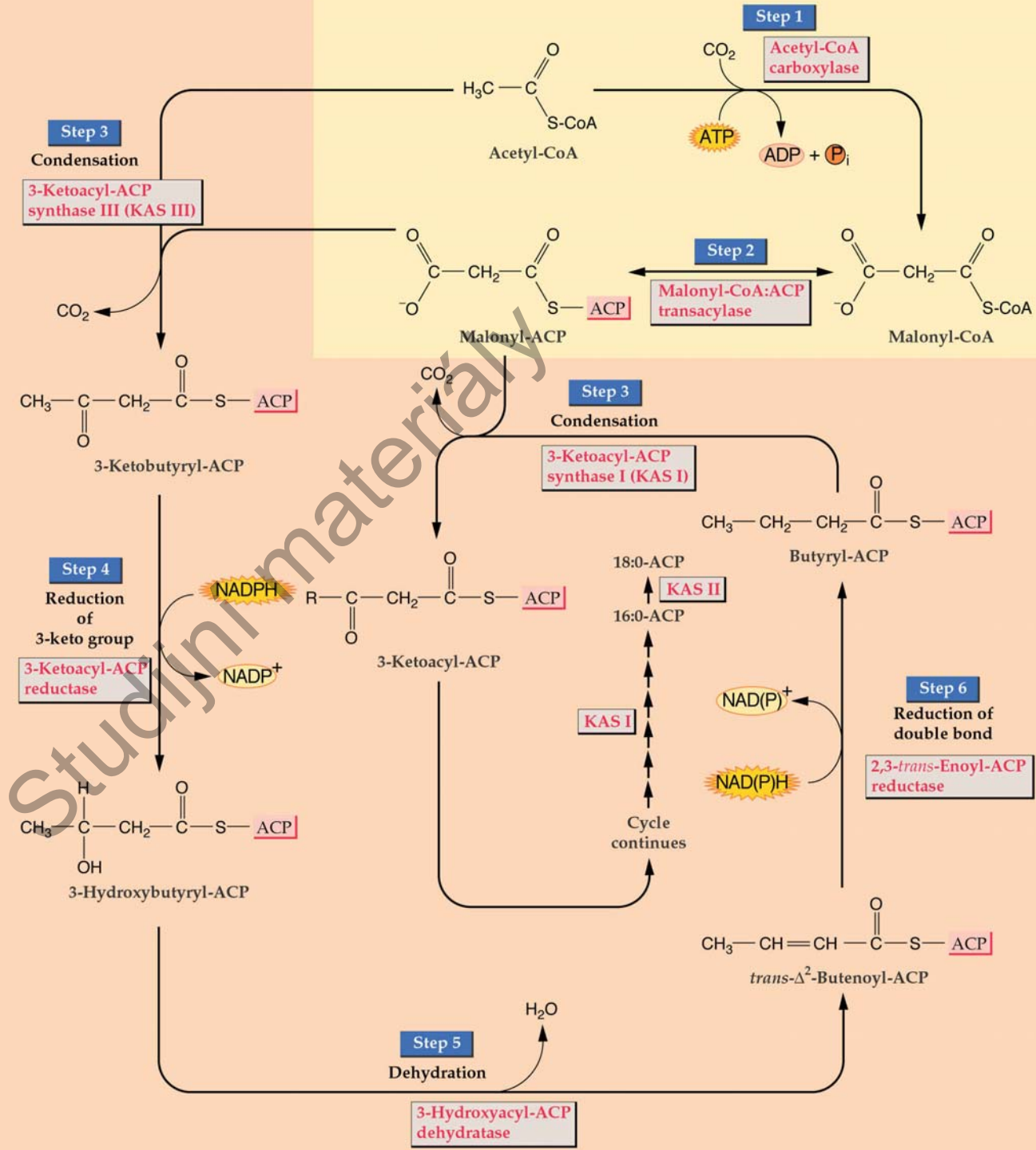
Lipidy

Studijní materiály

Syntéza mastných kyselin u rostlin – lokalizace v buňce

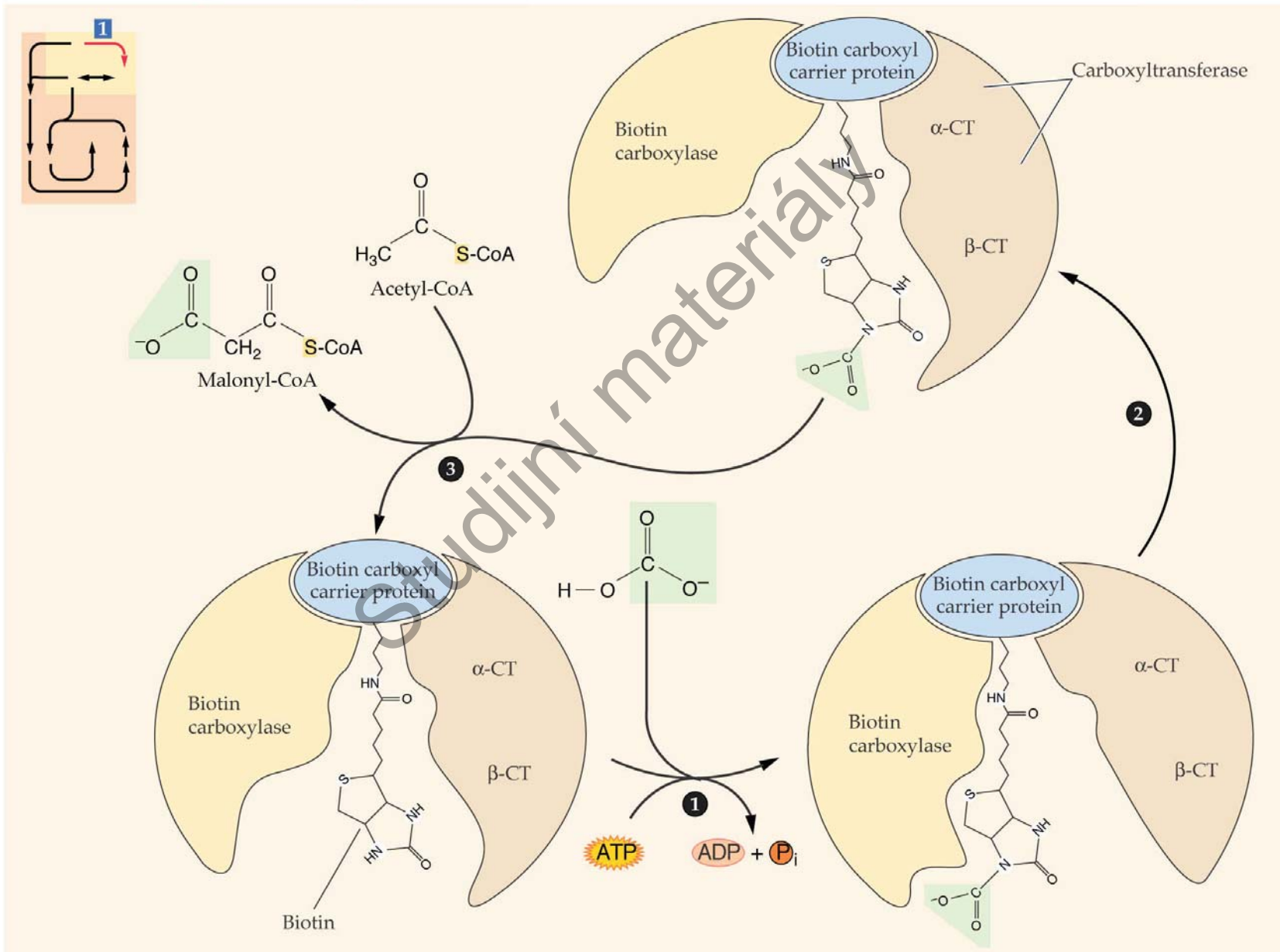


Syntéza mastných kyselin u rostlin - dráhy



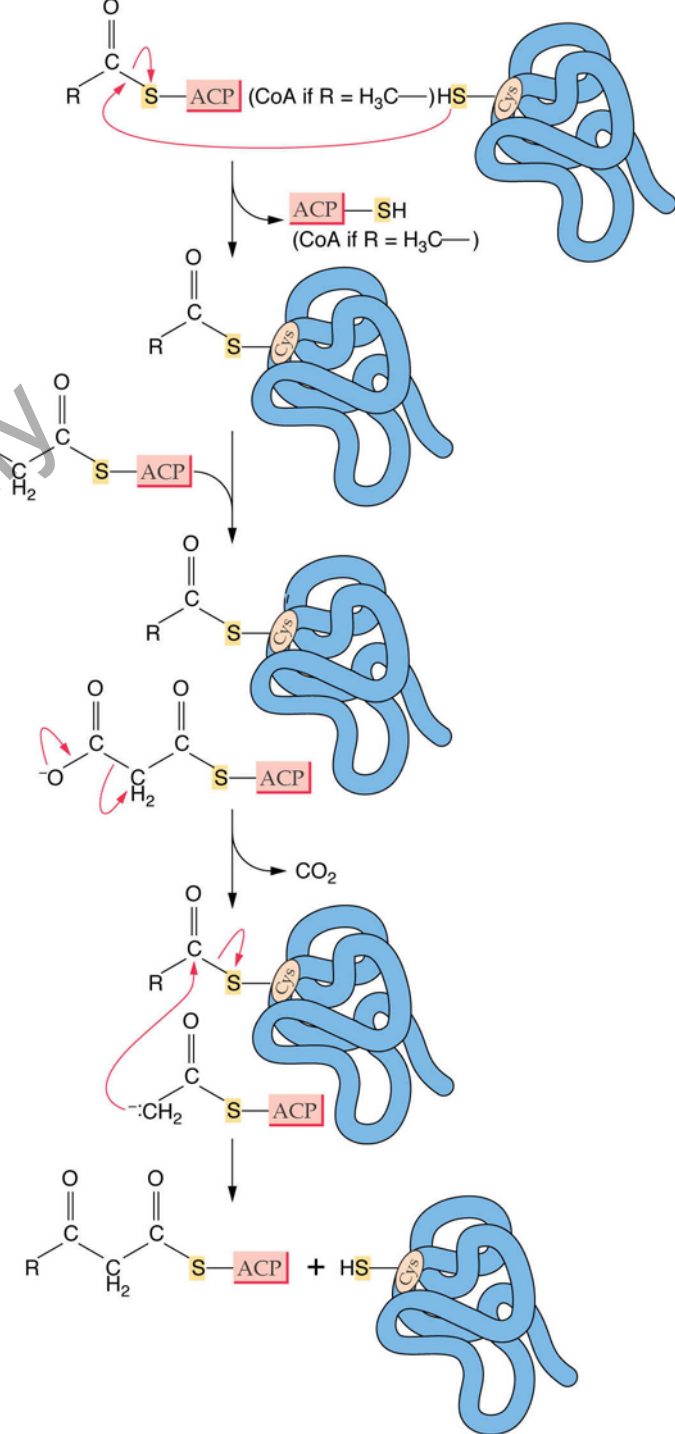
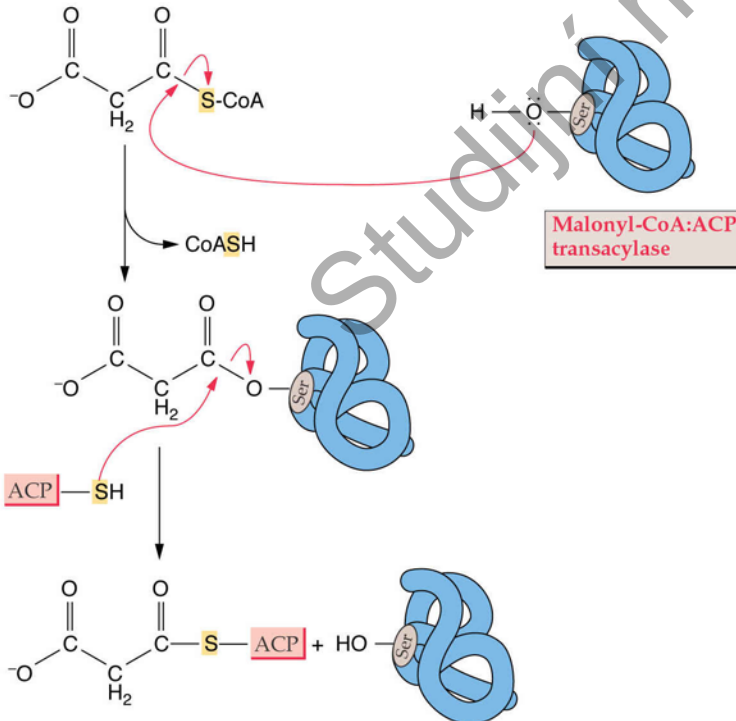
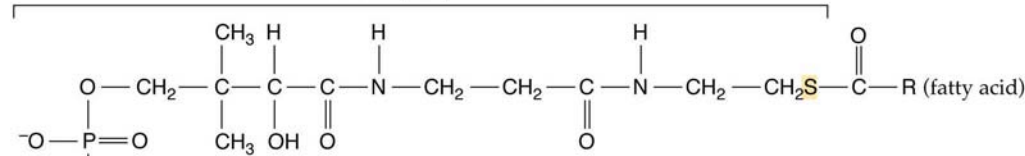
Acetyl-CoA carboxylasa

Reaction 10.1: Acetyl-CoA carboxylase

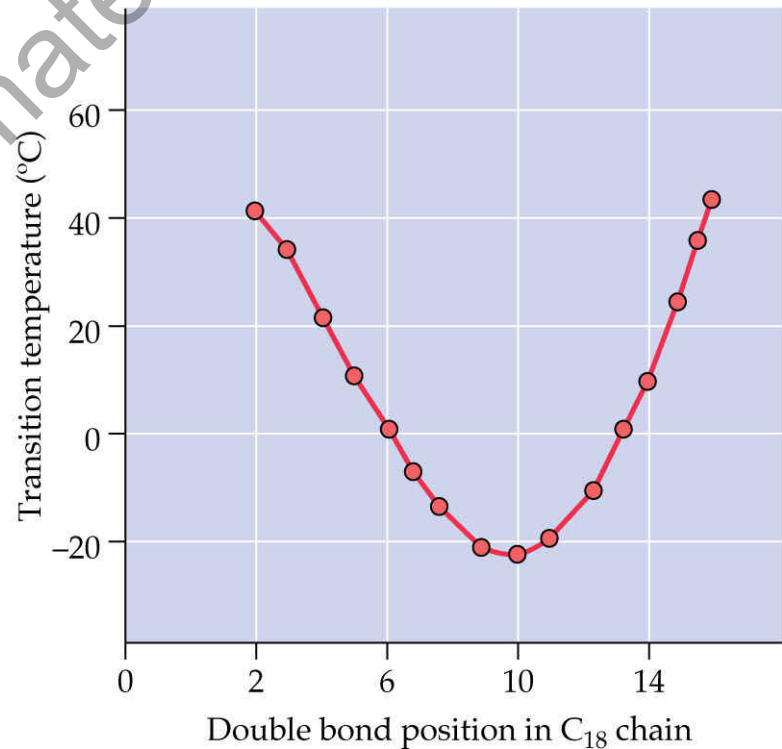
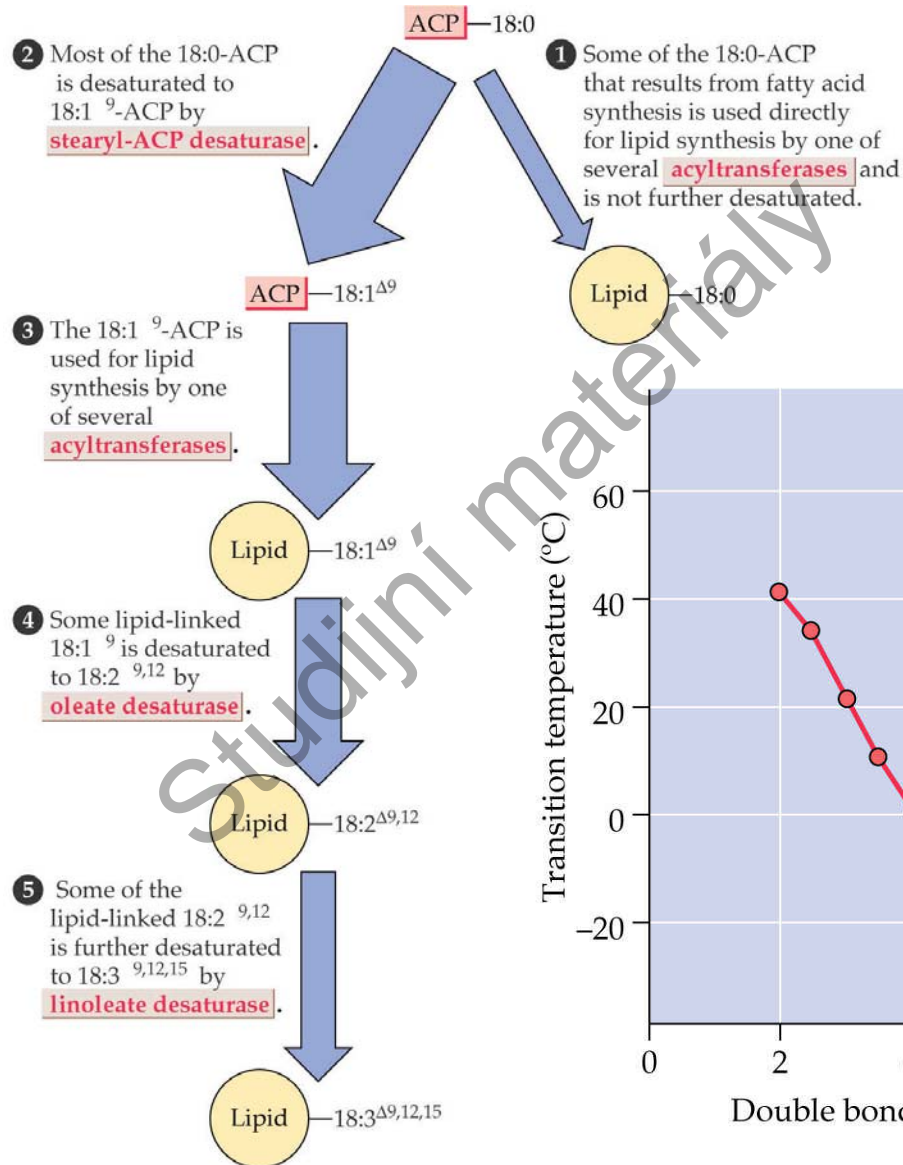


Syntéza mastných kyselin u rostlin - prodlužování

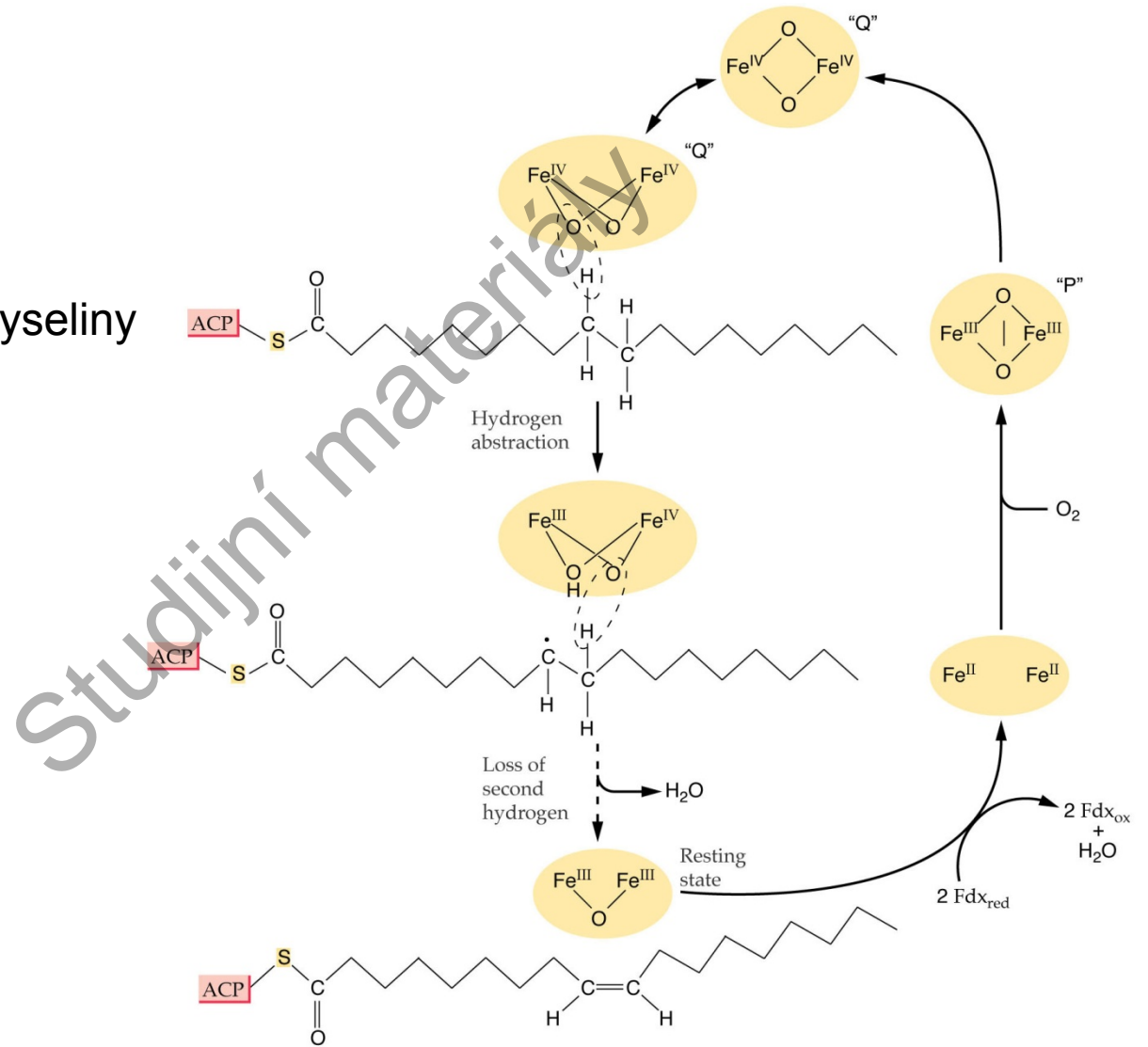
4'- Phosphopantetheine



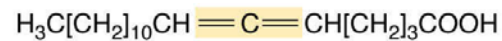
Nenasycené mastné kyseliny syntéza - schéma



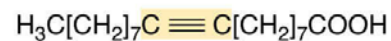
Nenasycené mastné kyseliny syntéza



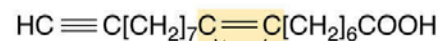
Neobvyklé mastné kyseliny



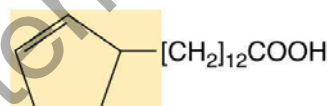
Laballic acid, an allenic acid



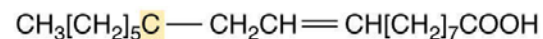
Stearolic acid, a monoacetylenic acid



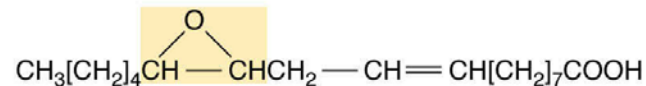
Sterculinic acid, a cyclopropene-containing acid



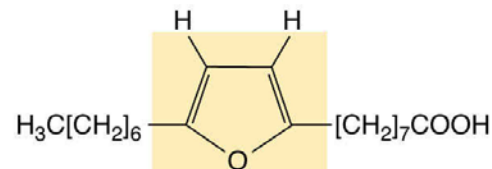
Chaulmoogric acid, a cyclopentenyl acid



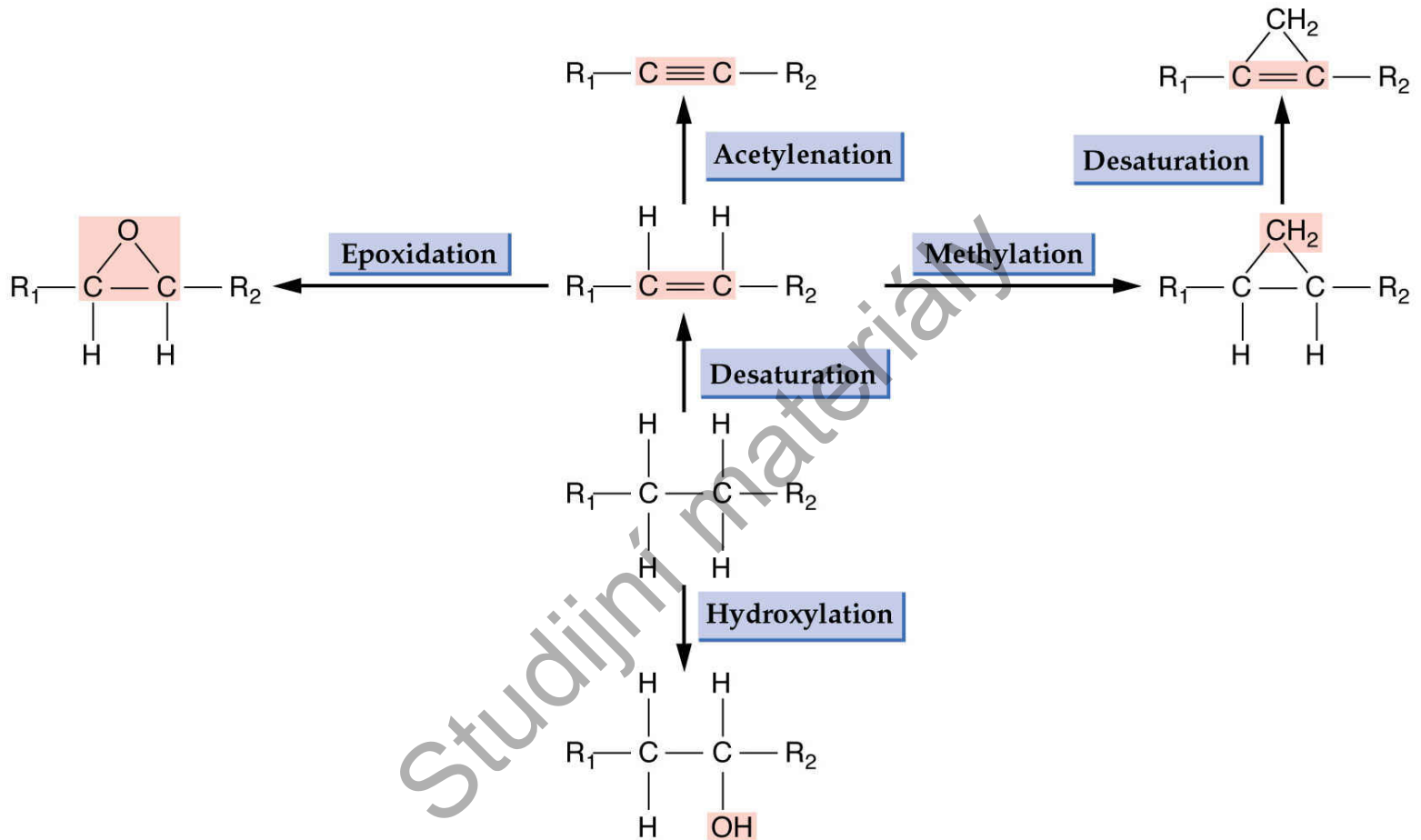
Ricinoleic acid, a hydroxy fatty acid



Vernolic acid, an epoxy fatty acid

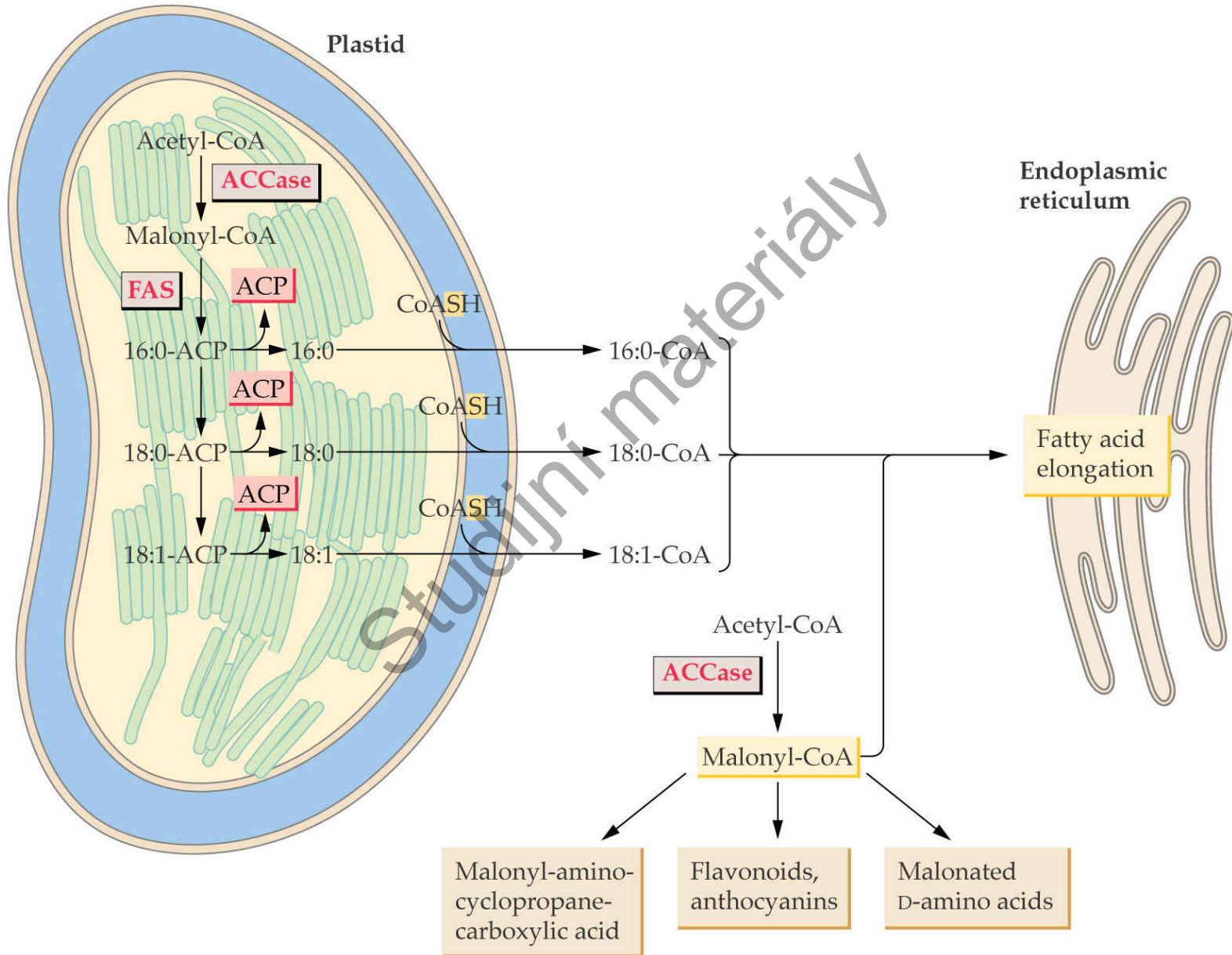


A furan-containing fatty acid



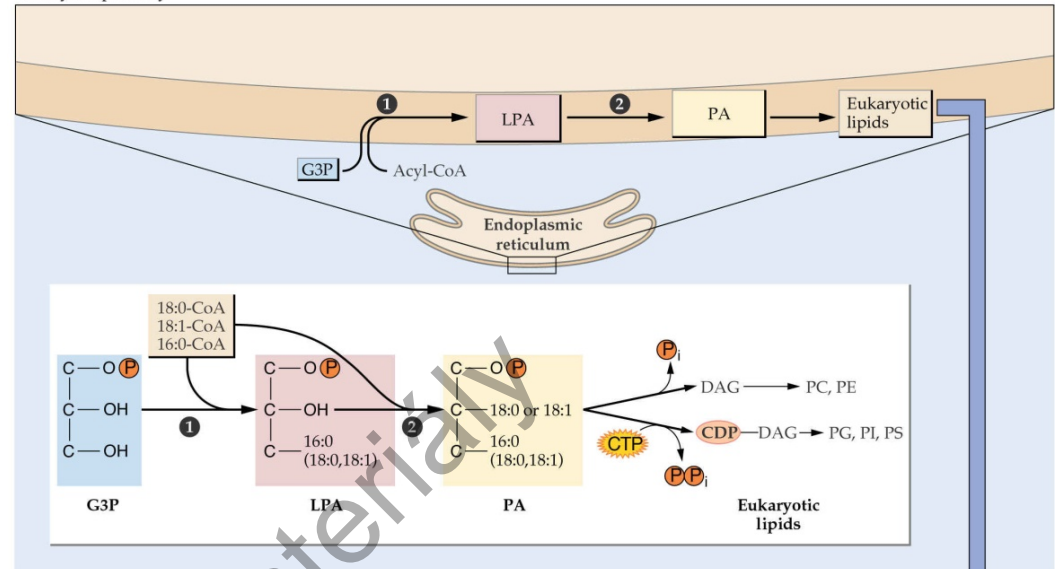
Syntéza neobvyklých MK

Distribuce mastných kyselin v rostlině

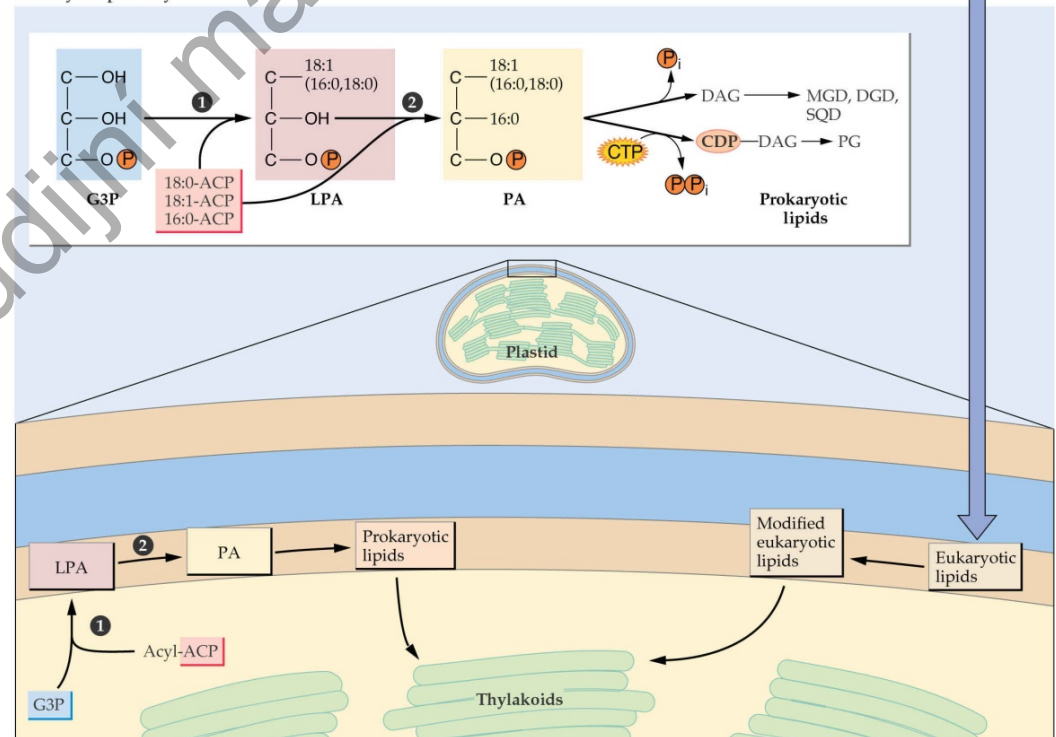


Syntéza glycerofosfolipidů

Eukaryotic pathway

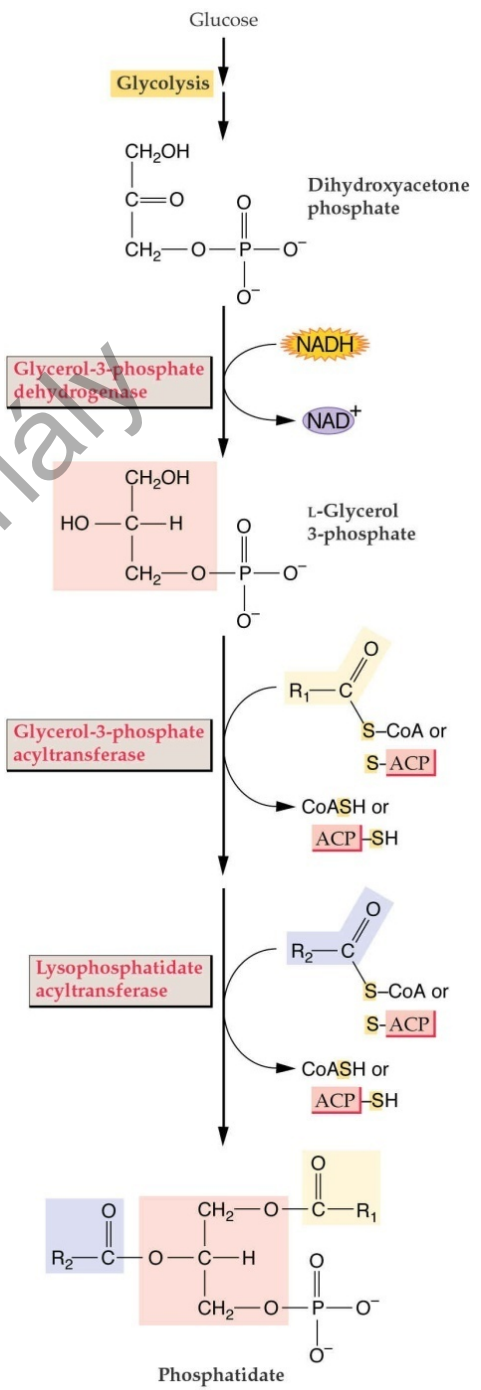


Prokaryotic pathway

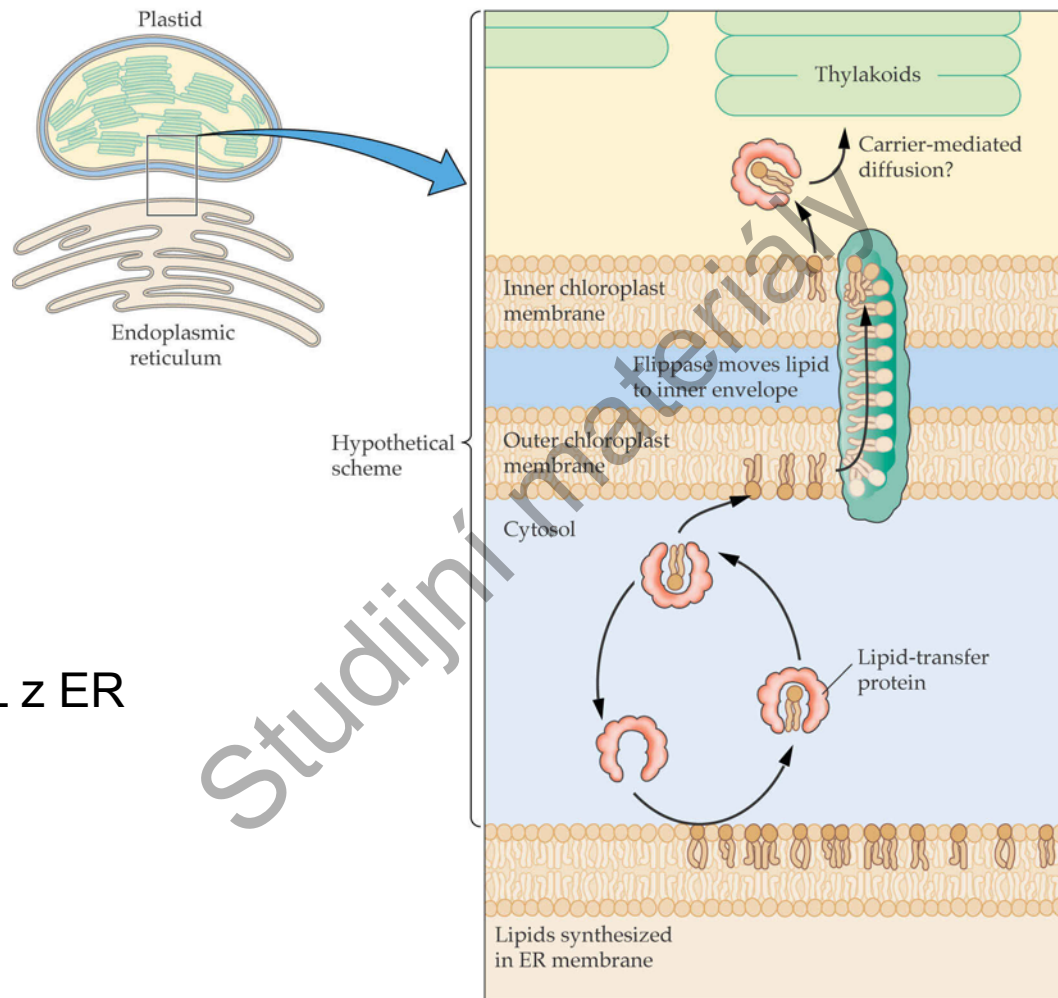


Syntéza glycerofosfolipidů

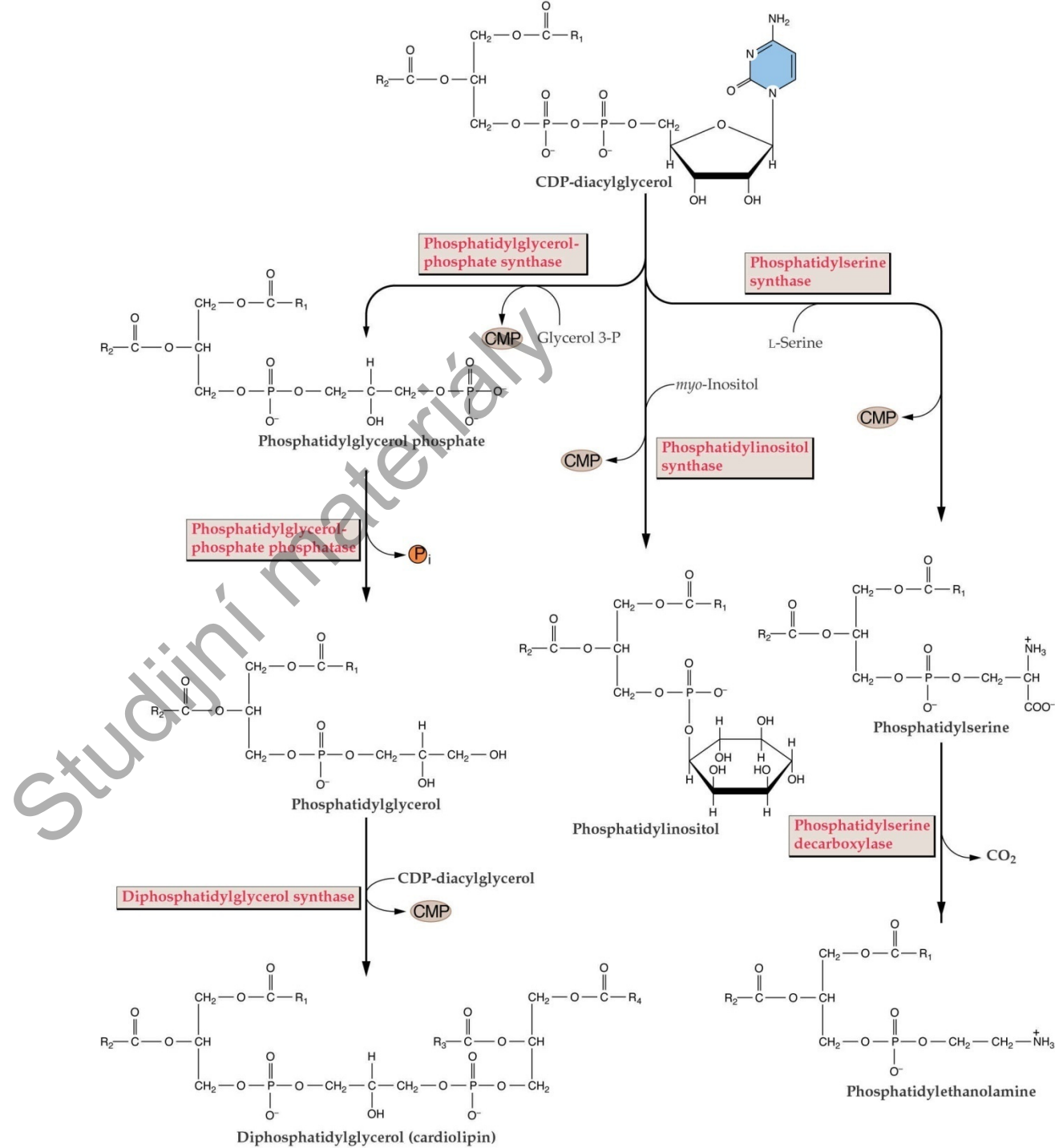
Studijní materiál



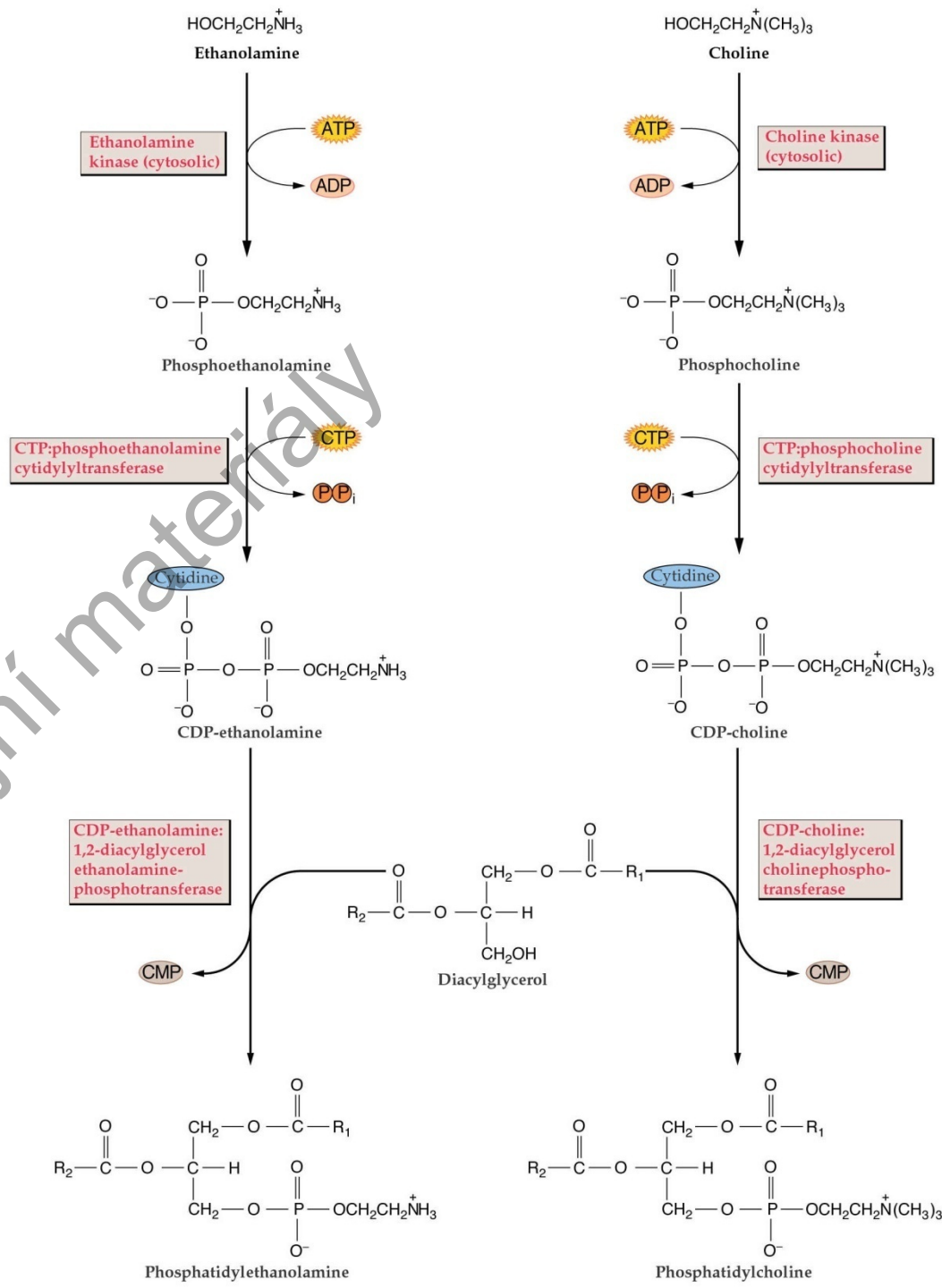
Transport PL z ER



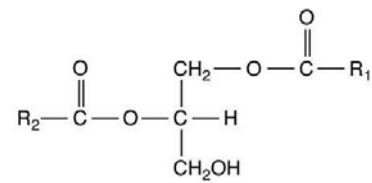
Syntéza phospholipidů



Syntéza fosfolipidů

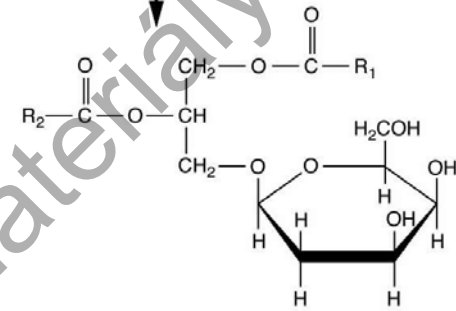


Galaktolipidy a sulfolipidy



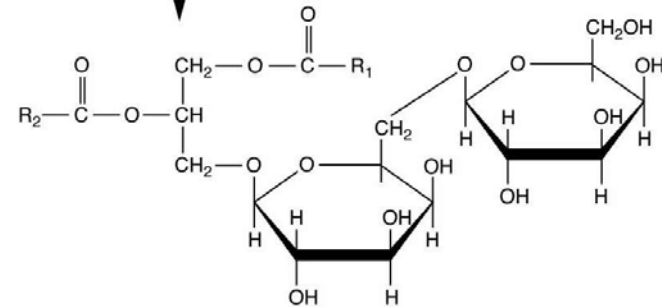
Diacylglycerol (DAG)

UDP-galactose:DAG
galactosyltransferase

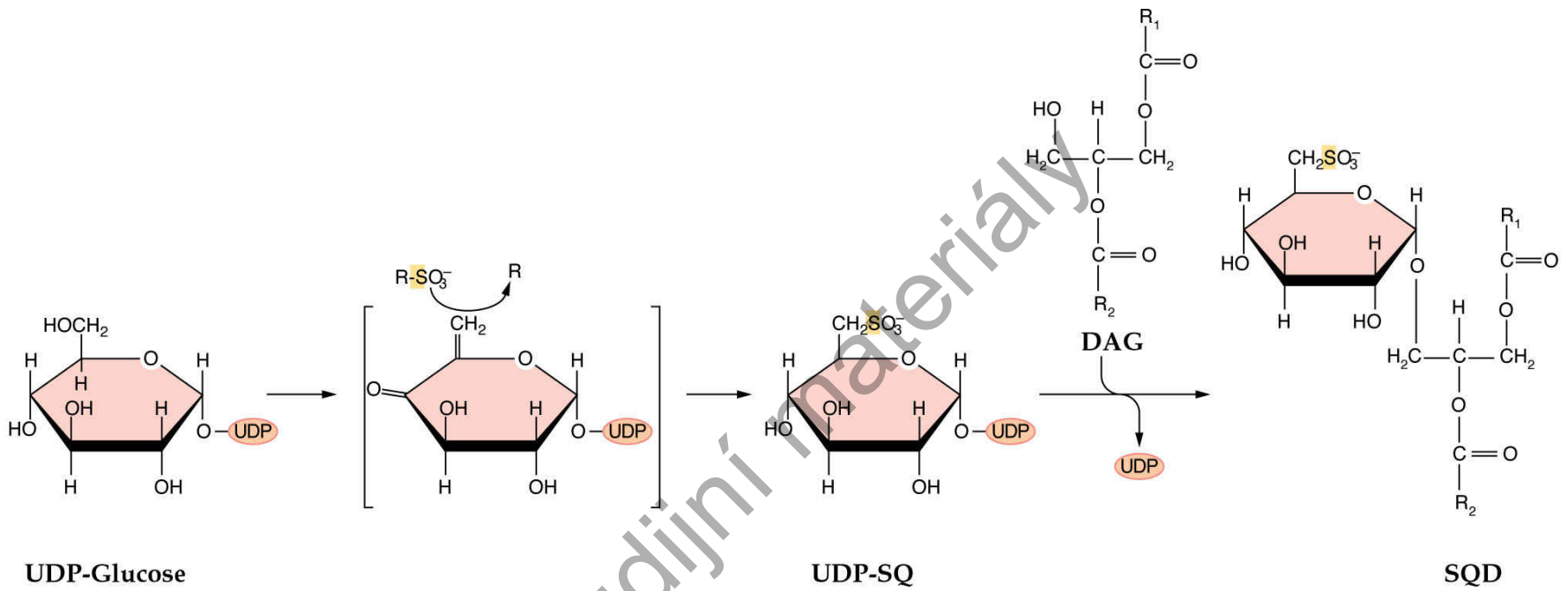


Monogalactosyldiacylglycerol (MGD)

Galactolipid
galactosyltransferase



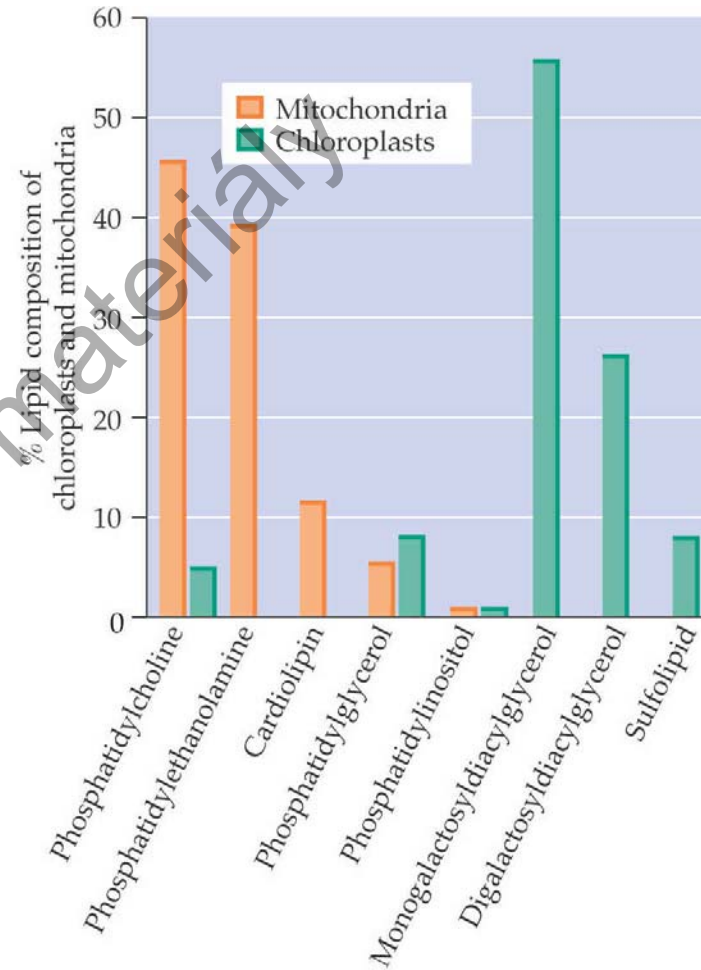
Digalactosyldiacylglycerol (DGD)



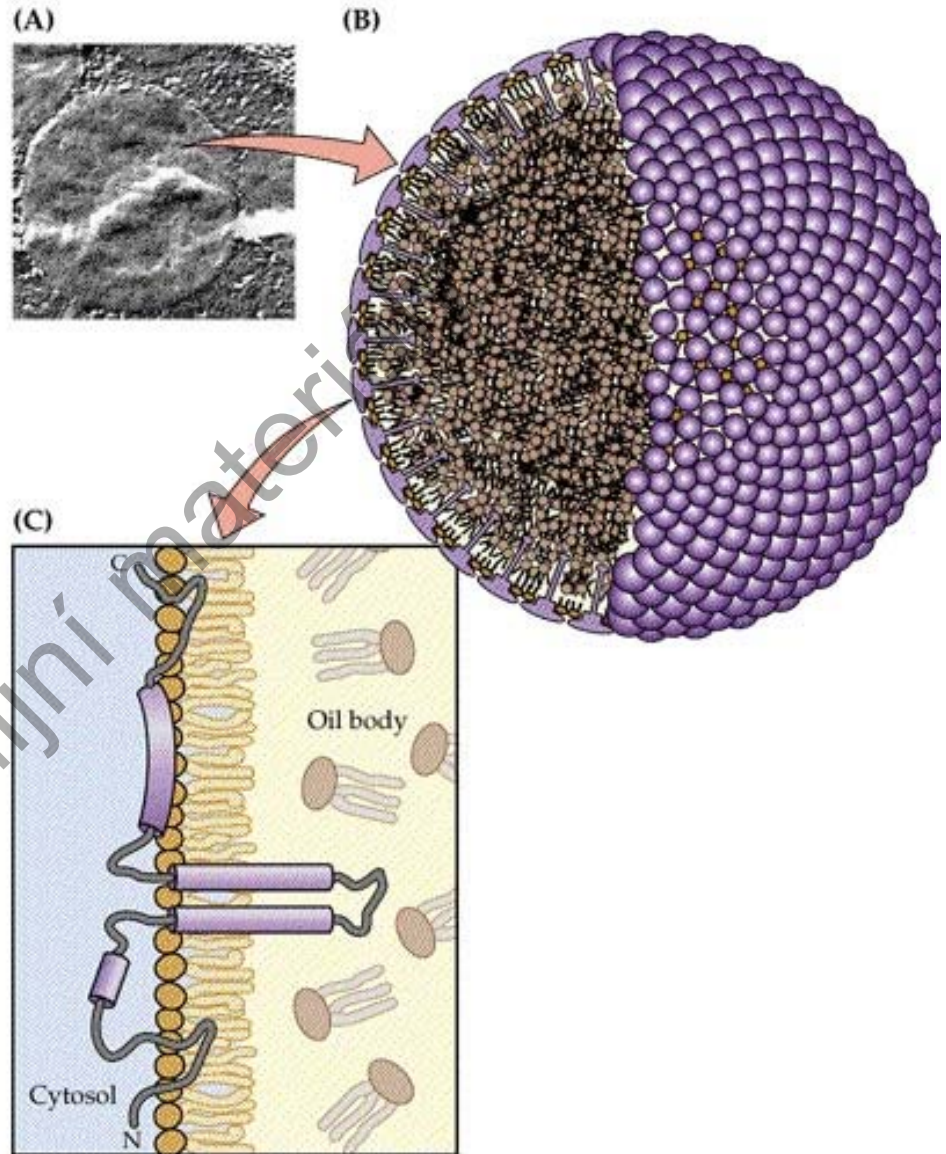
Syntéza sulfolipidů

Sulfoquinovosyl-diacylglycerol

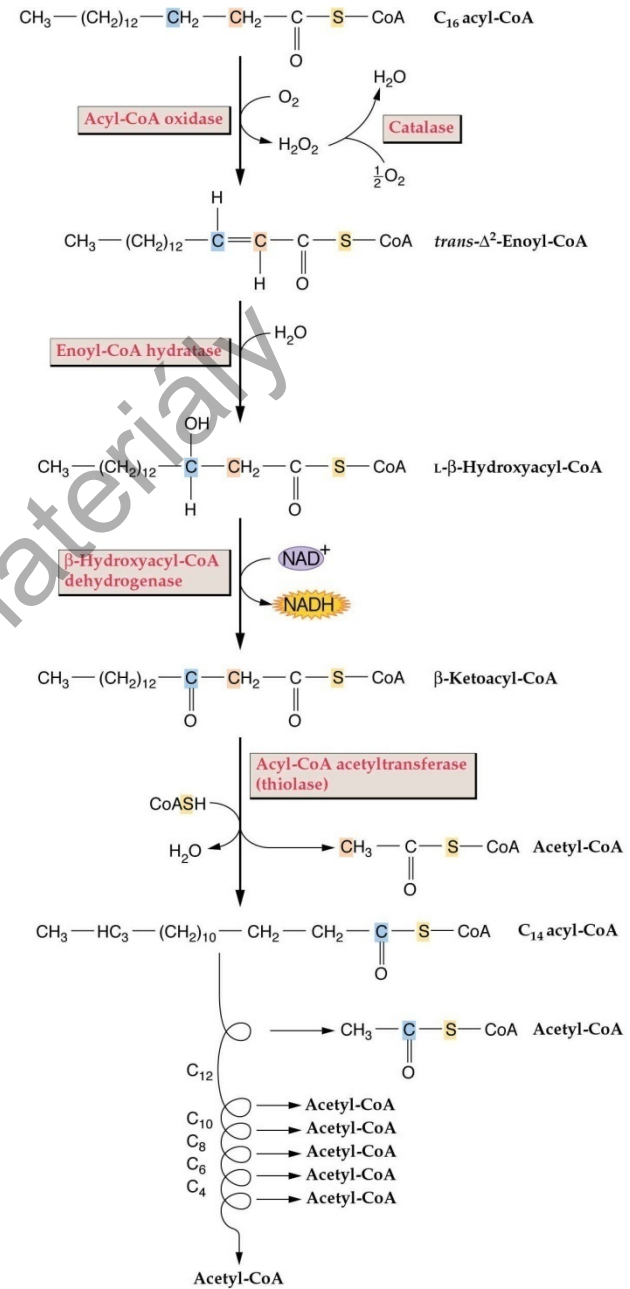
Fosfolipidy rostlinných membrán



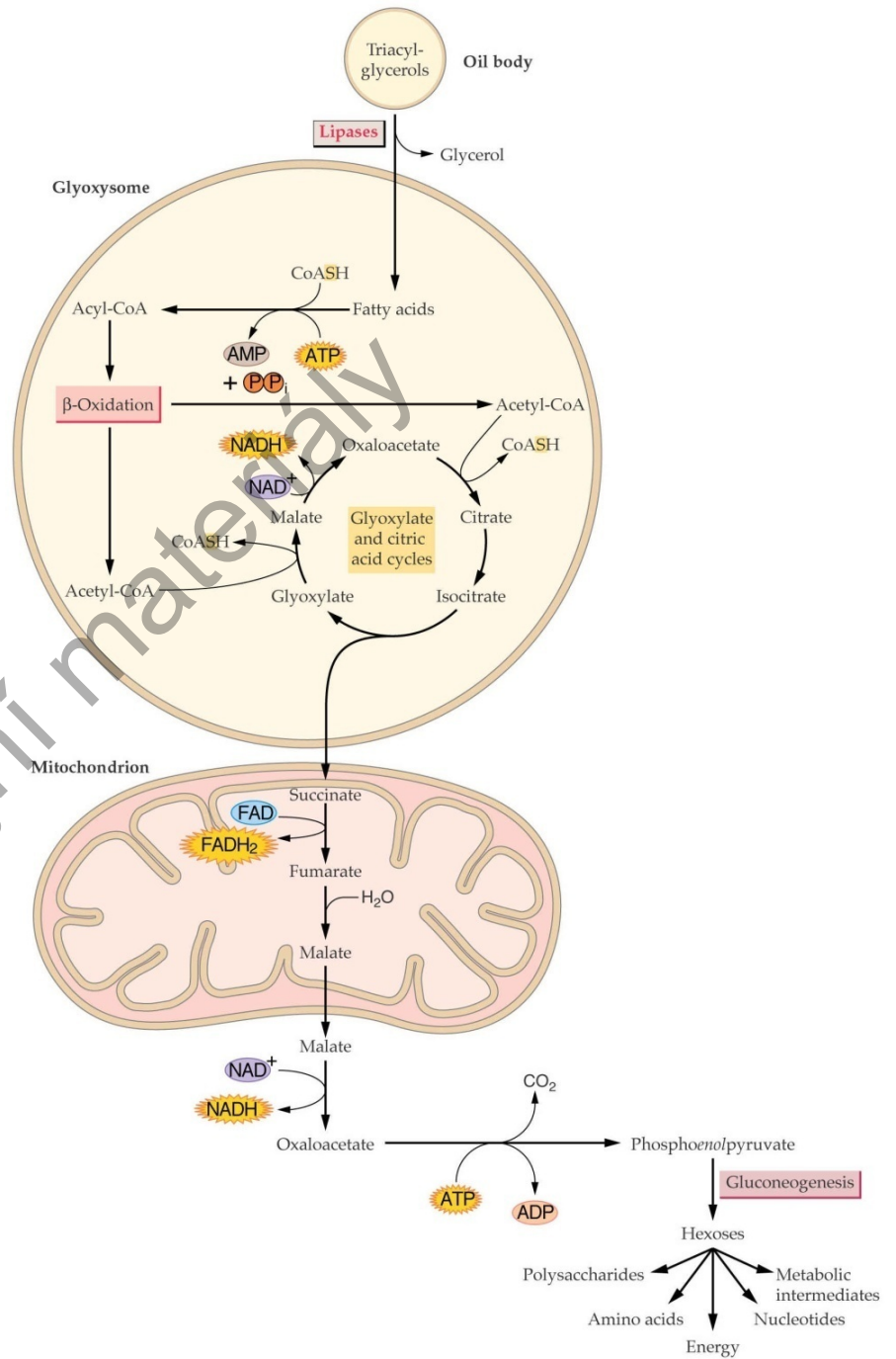
Oleosiny olejového tělíska



Degradace MK u rostlin



Glyoxylátový cyklus



Glyoxylátový cyklus

