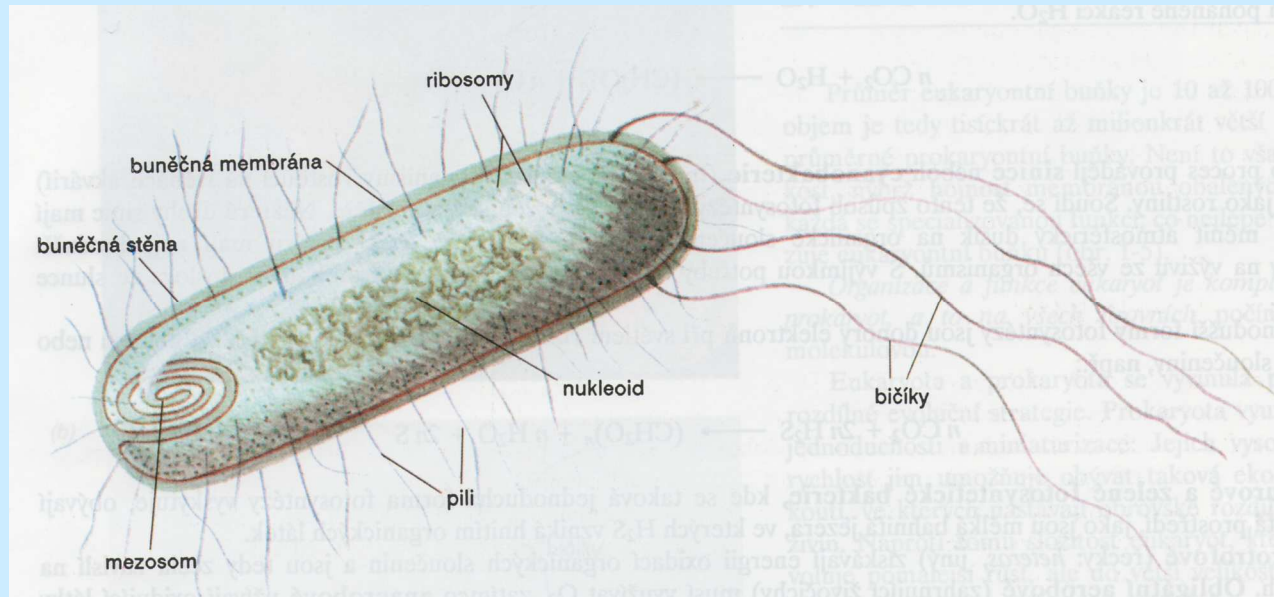
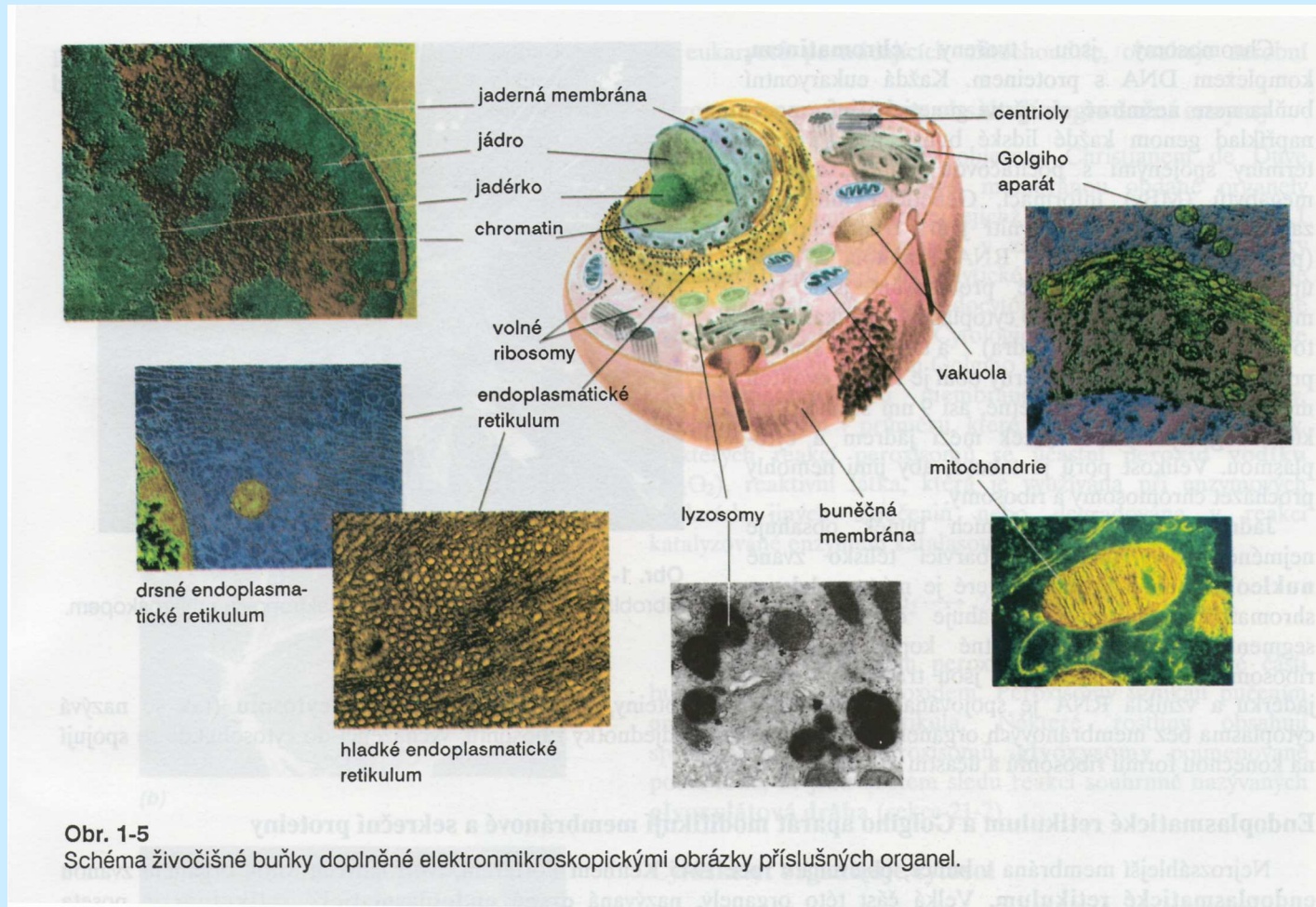


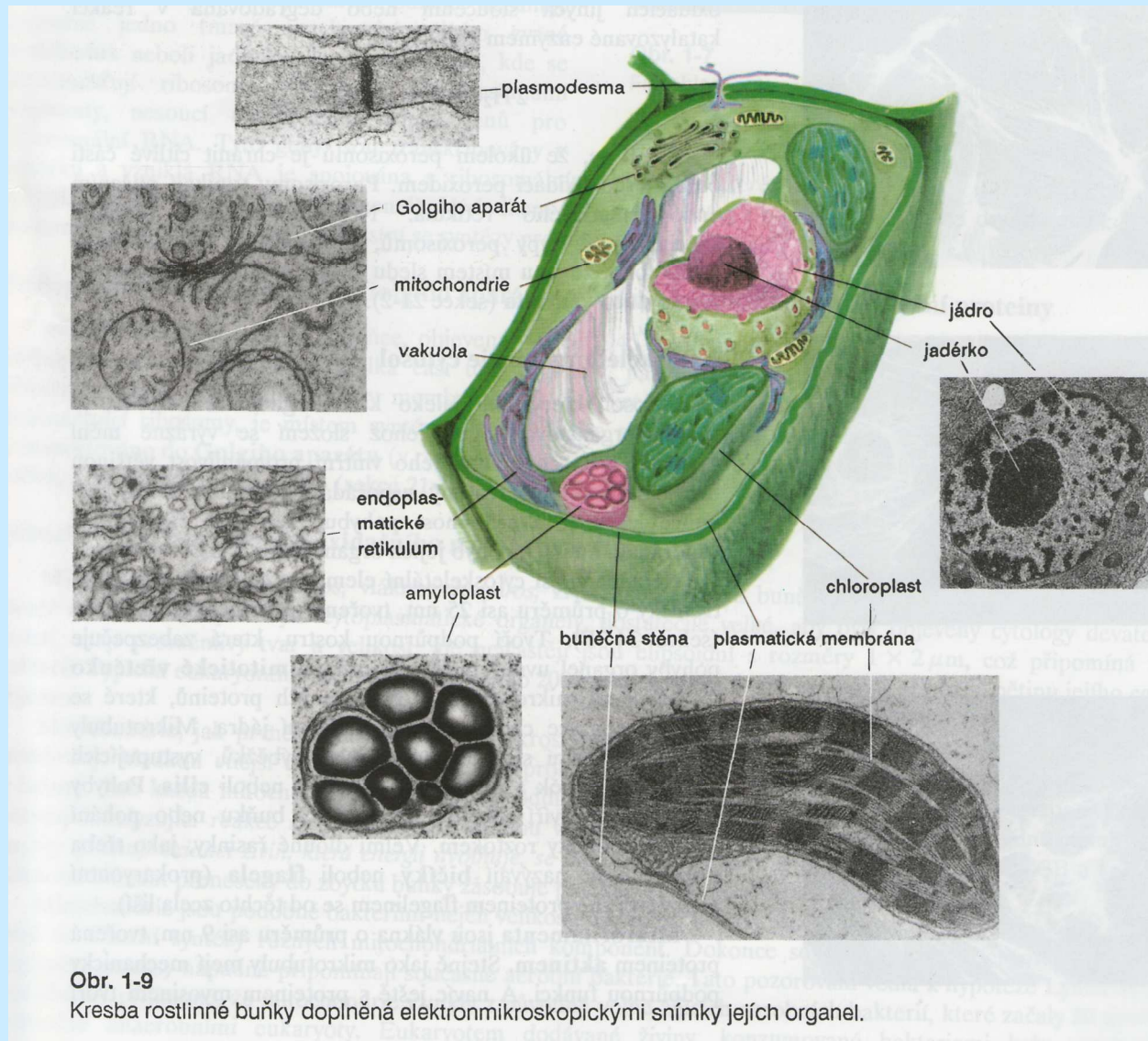
PROKARYOTICKÁ BUŇKA



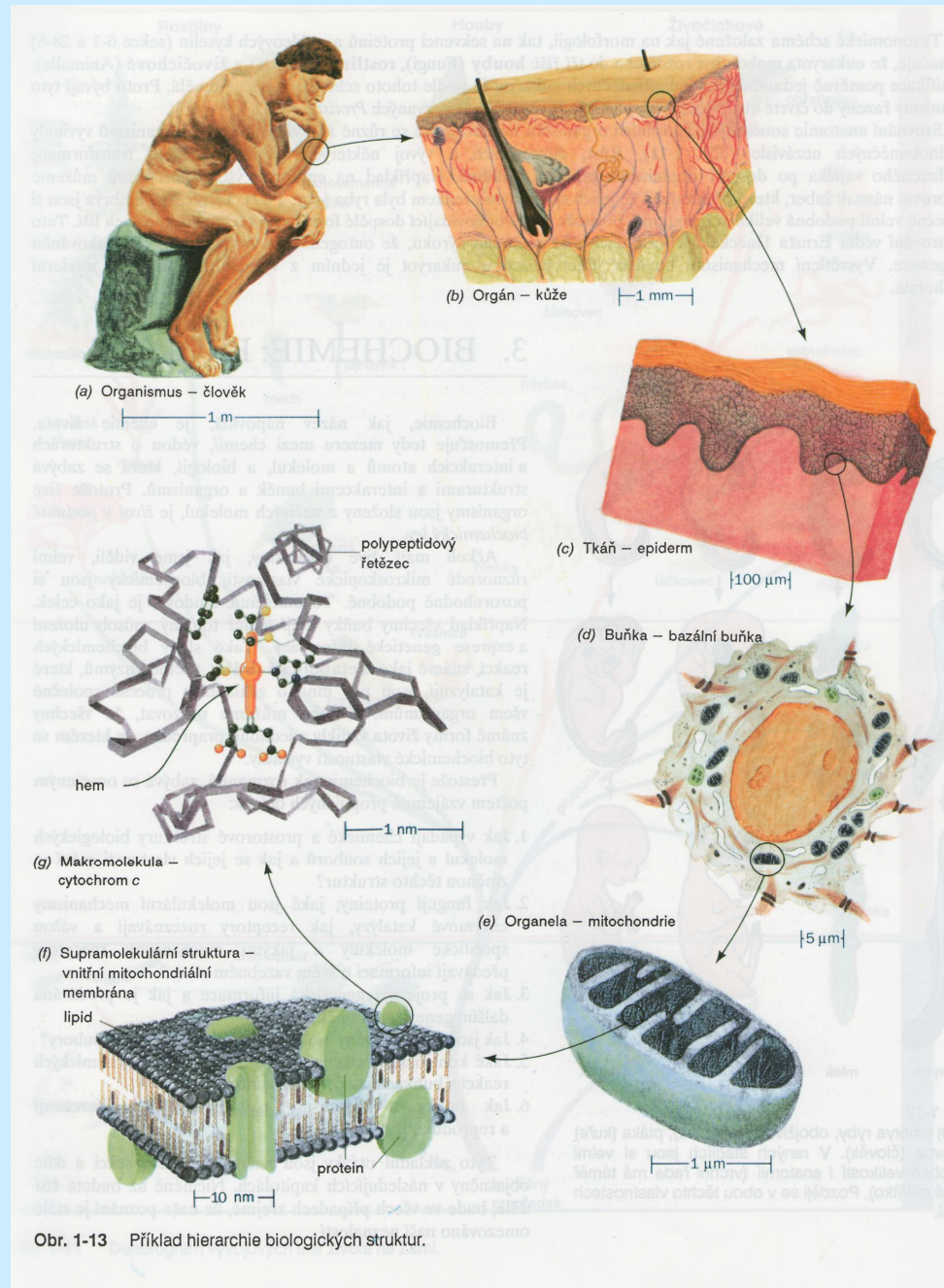
EUKARYOTICKÁ BUŇKA - ŽIVOČIŠNÁ



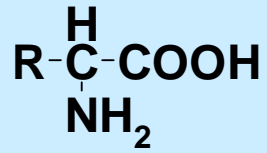
EUKARYOTICKÁ BUŇKA - ROSTLINNÁ



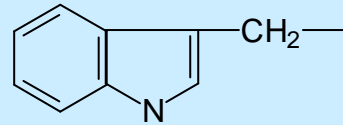
HIERARCHIE BIOLOGICKÝCH STRUKTUR



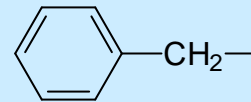
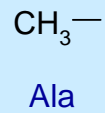
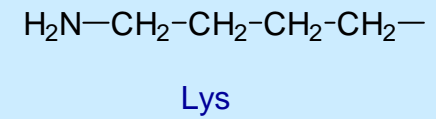
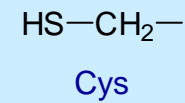
Obr. 1-13 Příklad hierarchie biologických struktur.



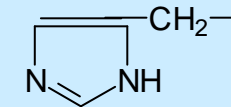
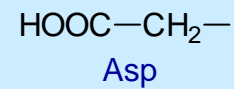
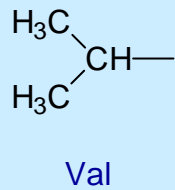
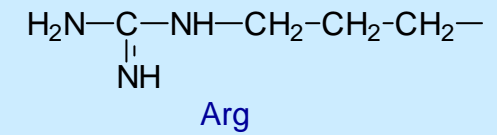
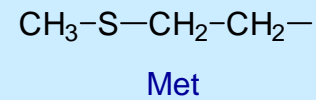
PŘEHLED AMINOKYSELIN



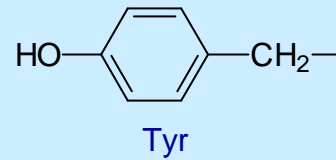
Trp



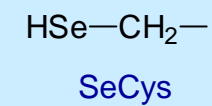
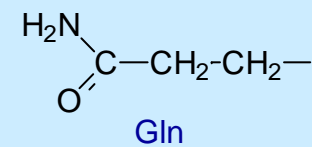
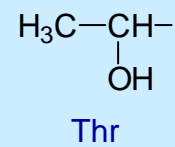
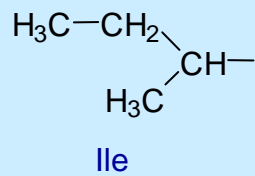
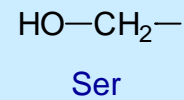
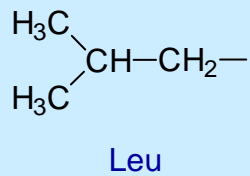
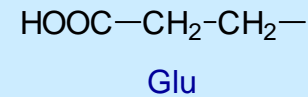
Phe



His

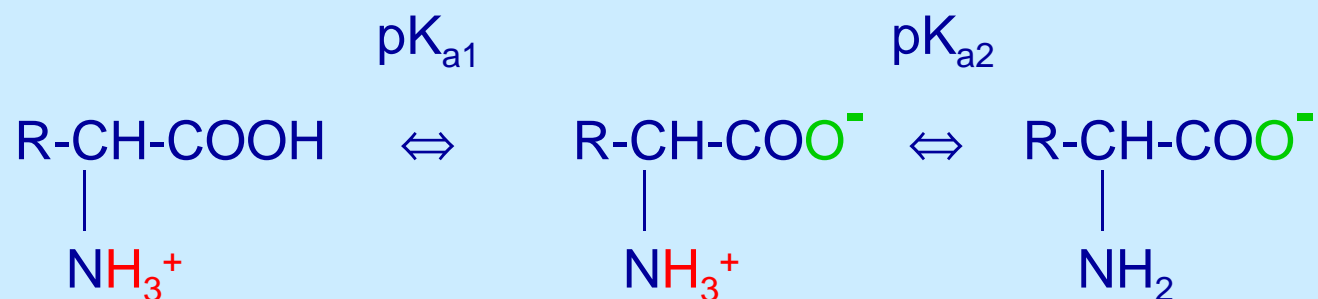


Tyr



DISOCIACE AMINOKYSELIN

I. DISOCIACE KARBOXYLOVÉ SKUPINY A AMINOSKUPINY



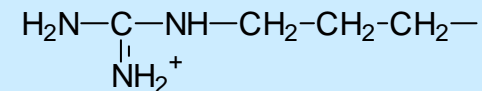
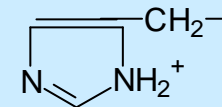
II. DISOCIACE BOČNÍHO ŘETĚZCE

- pK_{a3}
1. -R nedisociuje
 2. $-\text{RH} \rightleftharpoons -\text{R}^-$ KYSELÉ AK: protonovaná forma je nenabitá
 3. $-\text{RH}^+ \rightleftharpoons -\text{R}$ BAZICKÉ AK: protonovaná forma je kladně nabitá

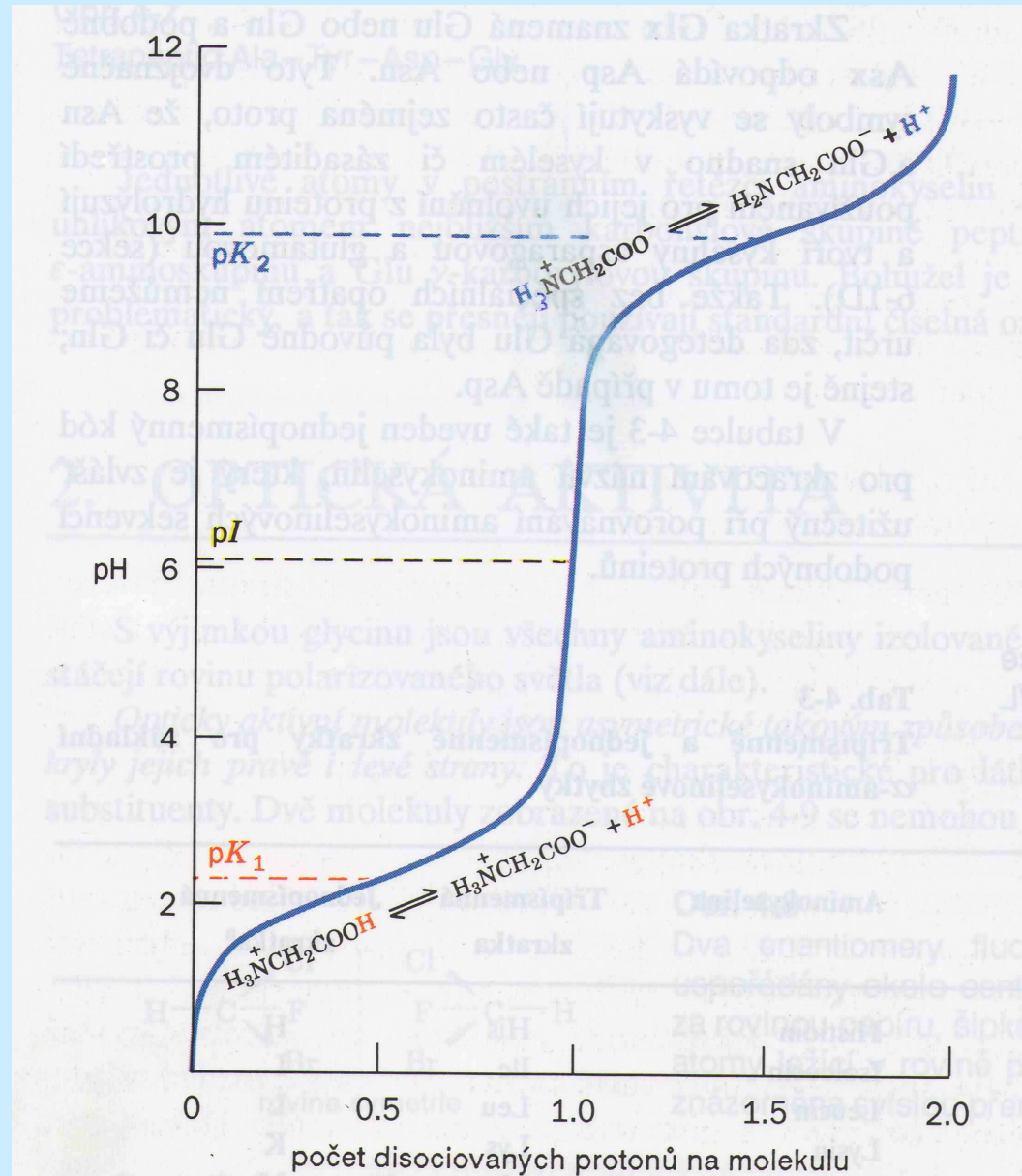
Typ disociace bočního řetězce a jeho náboj při daném pH lze rozlišit pouze na základě znalosti jeho chemické struktury!!!

DISOCIAČNÍ KONSTANTY AMINOKYSELIN

AK	pK_{a1}	pK_{a2}	$pK_{a3}=pK_a$ bočního řetězce	
• Ala	2.3	9.9		
• Gly	2.4	9.8		
• Phe	1.8	9.1		
• Ser	2.1	9.2		
• Val	2.3	9.6		
• Asp	2.0	10.0	3.9	-COOH
• Glu	2.2	9.7	4.3	-COOH
• His	1.8	9.2	6.0	-imidazolium
• Cys	1.8	10.8	8.3	-SH
• Tyr	2.2	9.1	10.9	-fenol
• Lys	2.2	9.2	10.8	-NH ₃ ⁺
• Arg	1.8	9.0	12.5	-guanidinium
• Asn	2.0	8.8		
• Gln	2.2	9.1		
• Trp	2.4	9.4		
• Leu	2.4	9.6		
• Ile	2.3	9.6		
• Met	2.3	9.2		
• Thr	2.2	9.1		
• Pro	2.0	10.6		

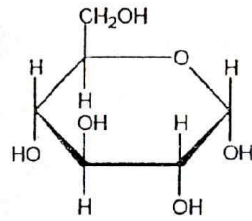


TITRAČNÍ KŘIVKA GLYCINU

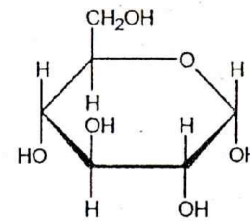


Obr. 4-5
Titrační křivka glycinu. Podobně jsou ionizovány také ostatní monoaminomonokarboxylové kyseliny.

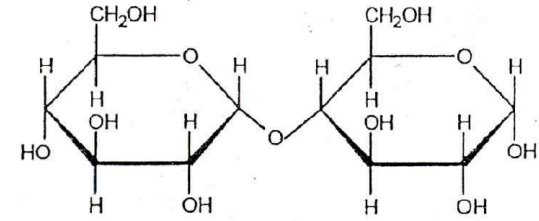
VYBRANÉ DISACHARIDY



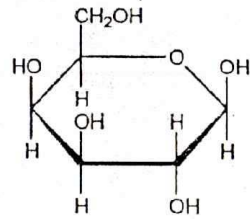
α - D - glukopyranosa



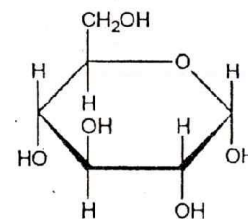
α - D - glukopyranosa



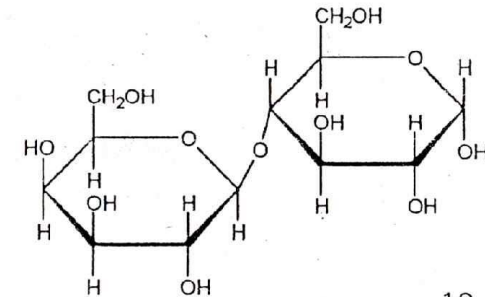
4-O- α -D-glukopyranosyl-D-glukopyranosa
(maltosa)



β - D - galaktopyranosa

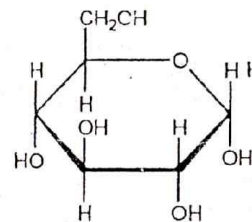


α - D - glukopyranosa

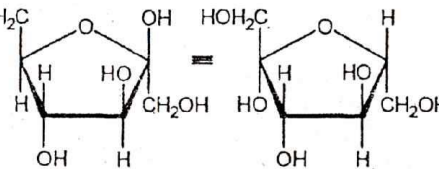


4-O- β -D-galaktopyranosyl-D-glukopyranosa
(laktosa)

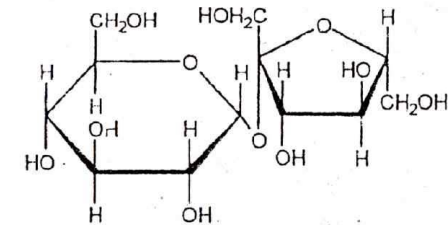
19.3.1.



α - D - glukopyranosa

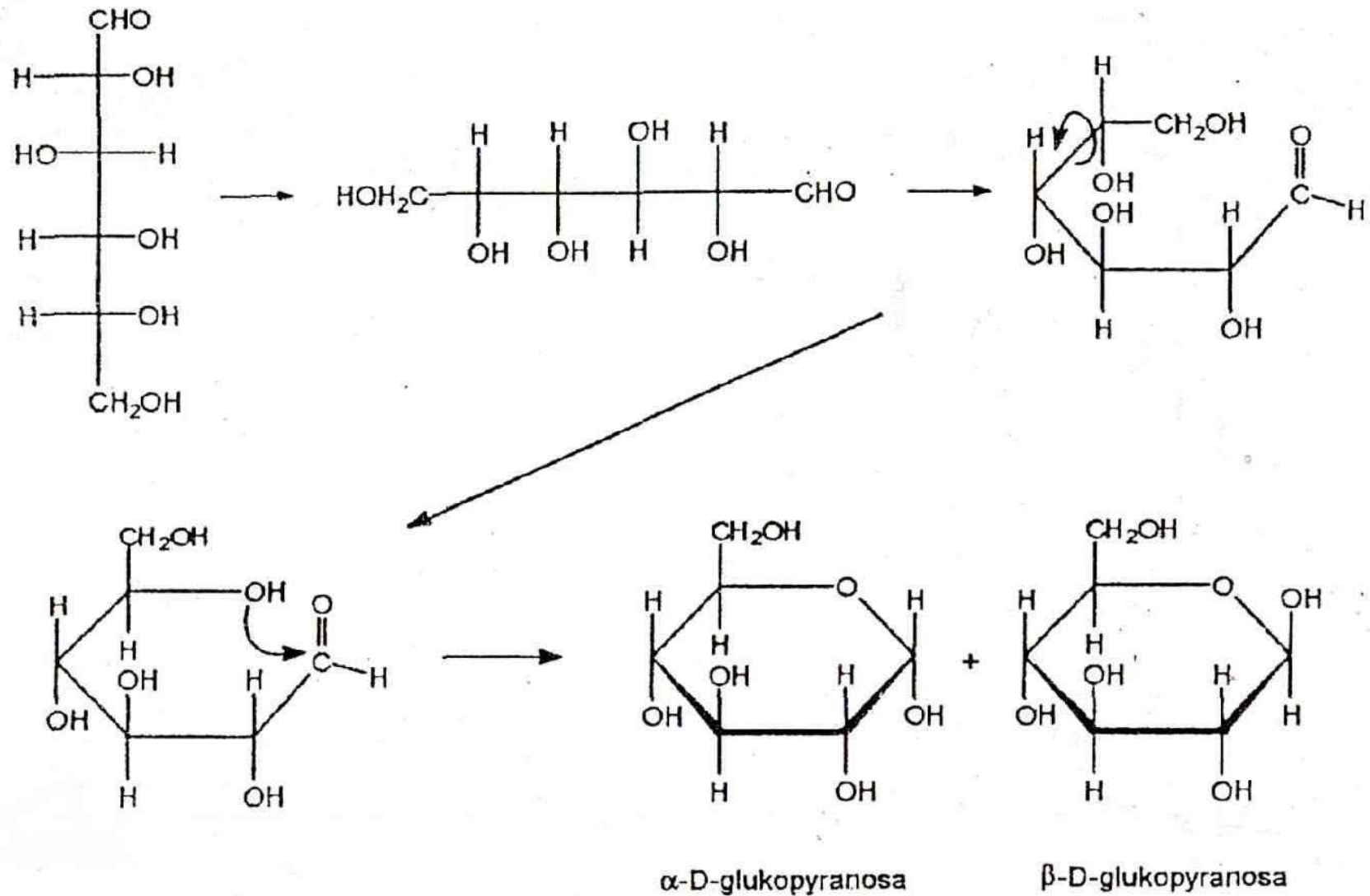


β - D - fruktofuranosa

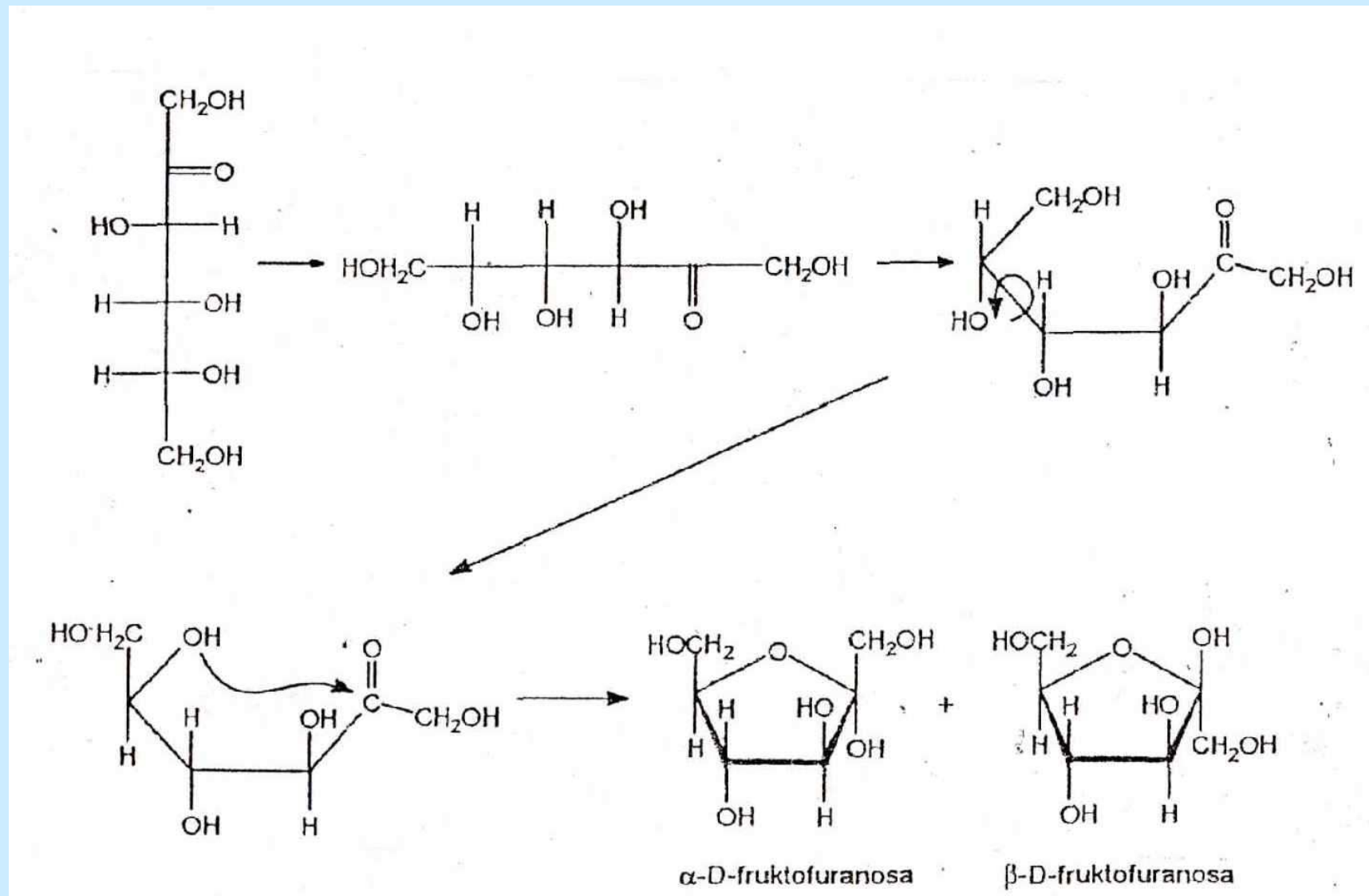


β -D-fruktofuranosyl- α -D-glukopyranosid
(sacharosa)

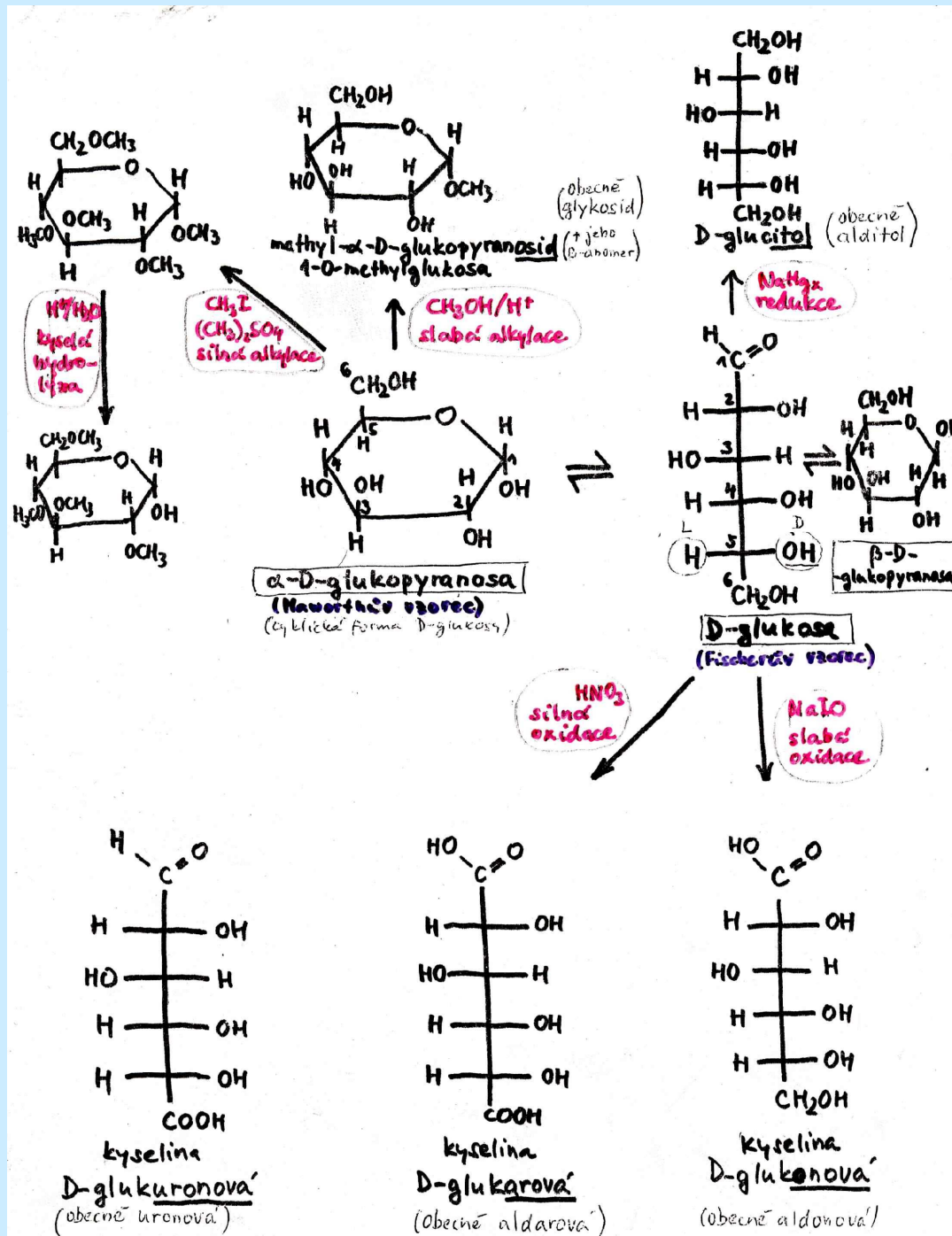
UZAVÍRÁNÍ CYKLU: ALDOSY



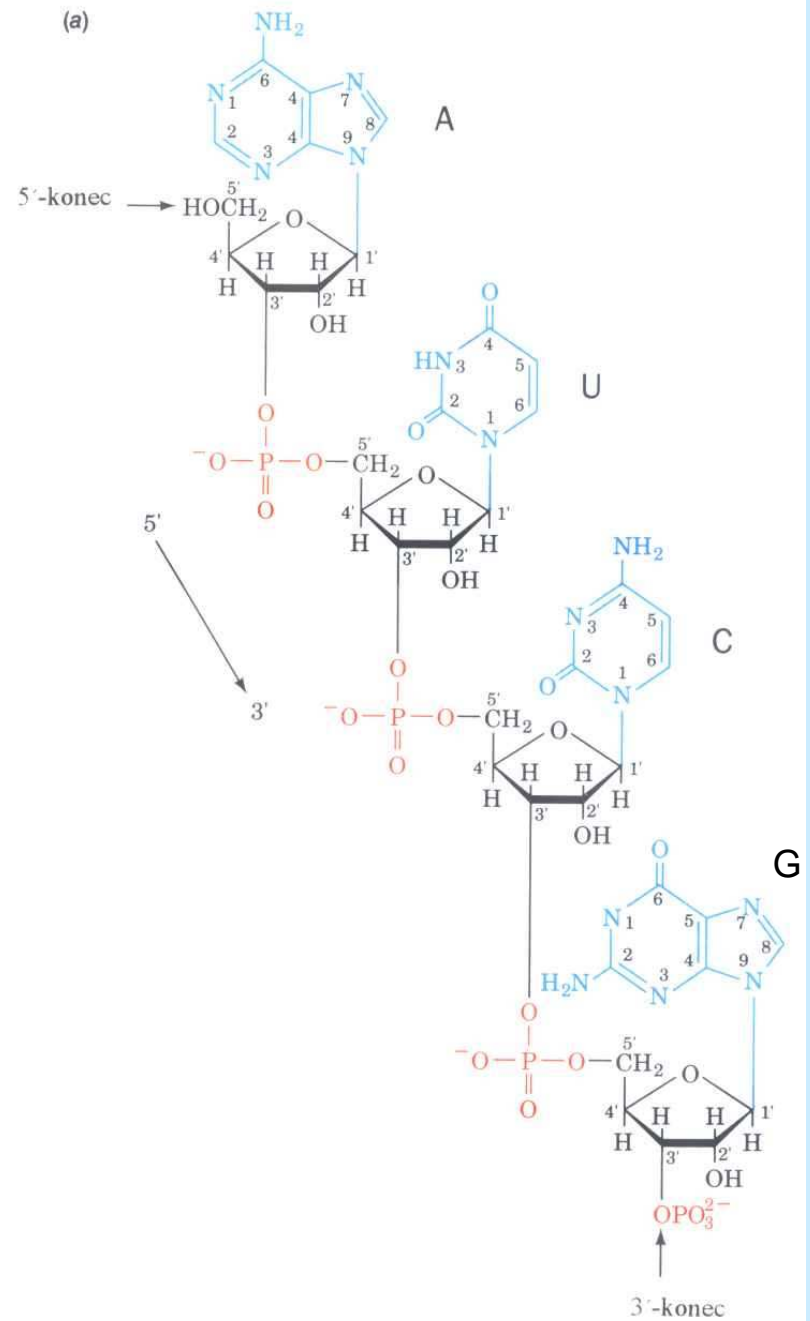
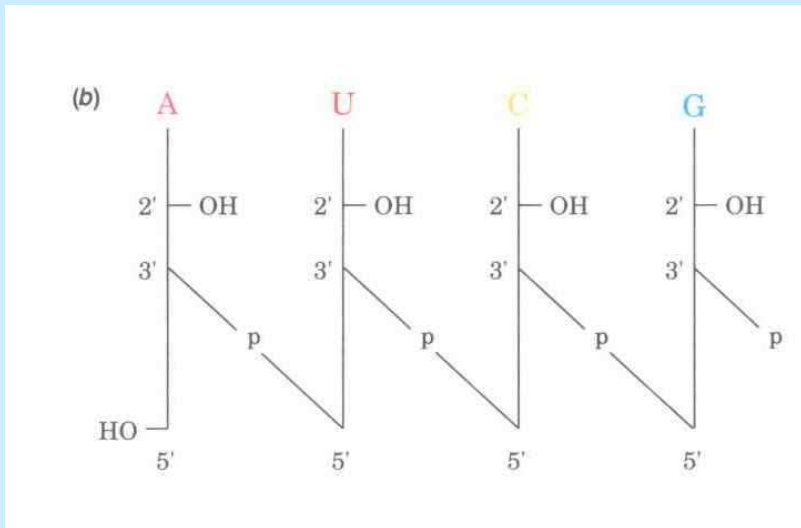
UZAVÍRÁNÍ CYKLU: KETOSY



VYBRANÉ CHEMICKÉ VLASTNOSTI MONOSACHARIDŮ



PRIMÁRNÍ STRUKTURA NUKLEOVÝCH KYSELIN



MAXAM-GILBERTOVA METODA SEKVENOVÁNÍ NUKLEOVÝCH KYSELIN

DETEKCE FRAGMENTŮ SEPAROVANÝCH ELEKTROFORÉZOU
NA FOSFOIMAGERU

(detekce radioaktivity - vizualizovány jsou pouze ^{32}P značené fragmenty)

