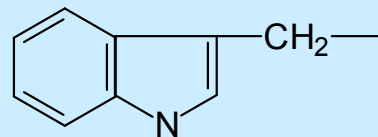
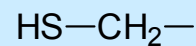


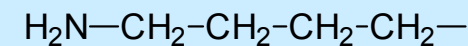
## PŘEHLED AMINOKYSELIN



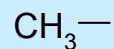
Trp



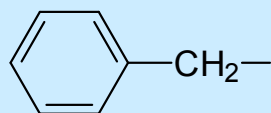
Cys



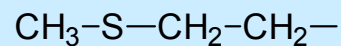
Lys



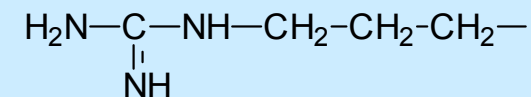
Ala



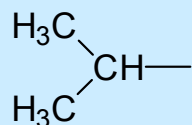
Phe



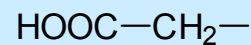
Met



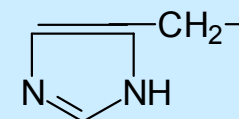
Arg



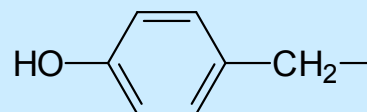
Val



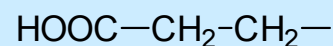
Asp



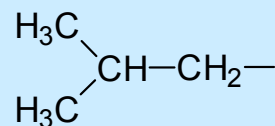
His



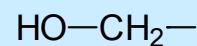
Tyr



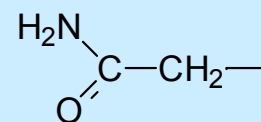
Glu



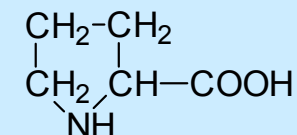
Leu



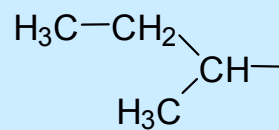
Ser



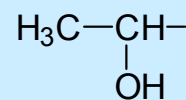
Asn



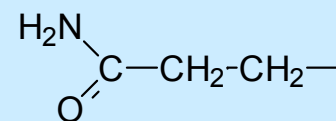
Pro



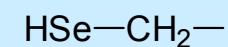
Ile



Thr



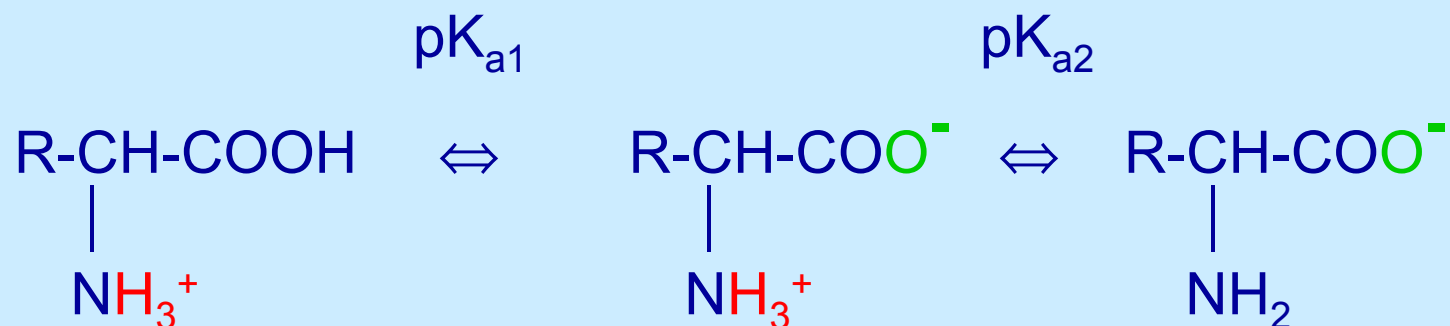
Gln



SeCys

# DISOCIACE AMINOKYSELIN

## I. DISOCIACE KARBOXYLOVÉ SKUPINY A AMINOSKUPINY



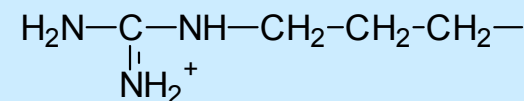
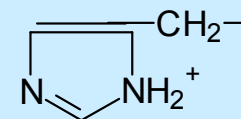
## II. DISOCIACE BOČNÍHO ŘETĚZCE

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

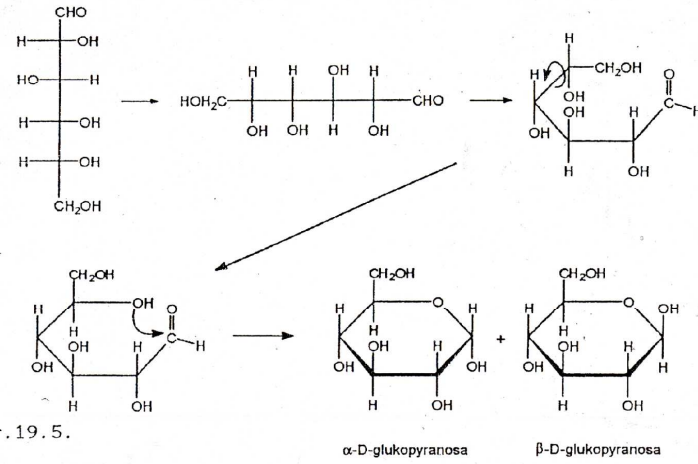
Typ disociace bočního řetězce a jeho náboj při daném pH lze rozlišit pouze na základě znalosti jeho chemické struktury!!!

# DISOCIAČNÍ KONSTANTY AMINOKYSELIN

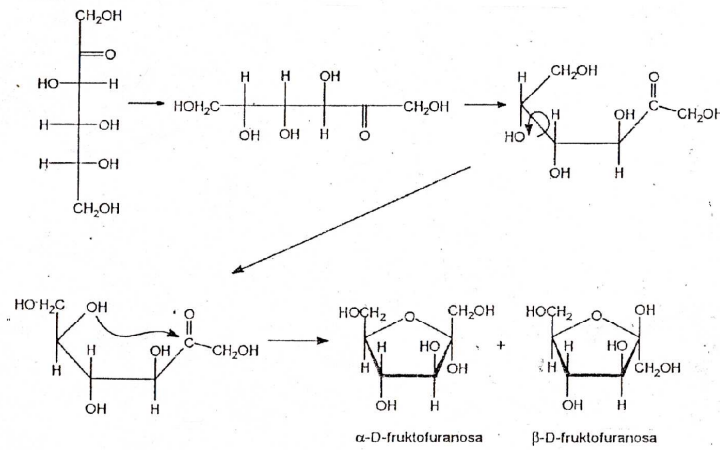
AK	$pK_{a1}$	$pK_{a2}$	$pK_{a3}=pK_a$ bočního řetězce	
• Ala	2.3	9.9		
• Gly	2.4	9.8		
• Phe	1.8	9.1		
• Ser	2.1	9.2		
• Val	2.3	9.6		
• Asp	2.0	10.0	3.9	-COOH
• Glu	2.2	9.7	4.3	-COOH
• His	1.8	9.2	6.0	-imidazolium
• Cys	1.8	10.8	8.3	-SH
• Tyr	2.2	9.1	10.9	-fenol
• Lys	2.2	9.2	10.8	-NH <sub>3</sub> <sup>+</sup>
• 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		



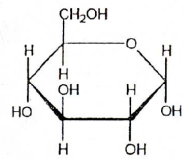




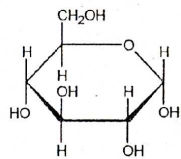
Obr. 19. 5.



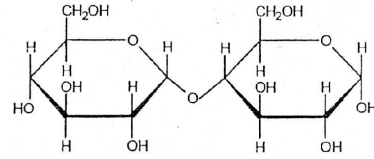
Obr. 19. 6.



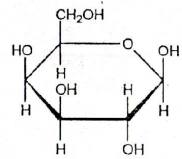
$\alpha$  - D - glukopyranosa



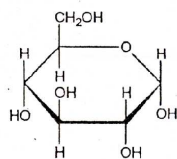
$\alpha$  - D - glukopyranosa



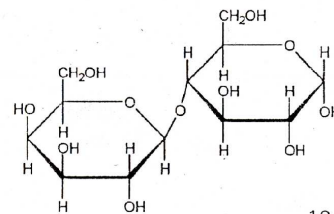
4-O- $\alpha$ -D-glukopyranosyl-D-glukopyranosa  
(maltosa)



$\beta$  - D - galaktopyranosa

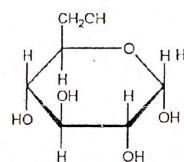


$\alpha$  - D - glukopyranosa

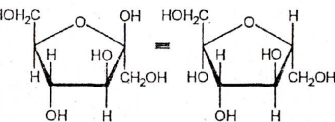


4-O- $\beta$ -D-galaktopyranosyl-D-glukopyranosa  
(laktosa)

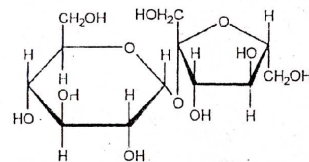
19.3.1.



$\alpha$  - D - glukopyranosa



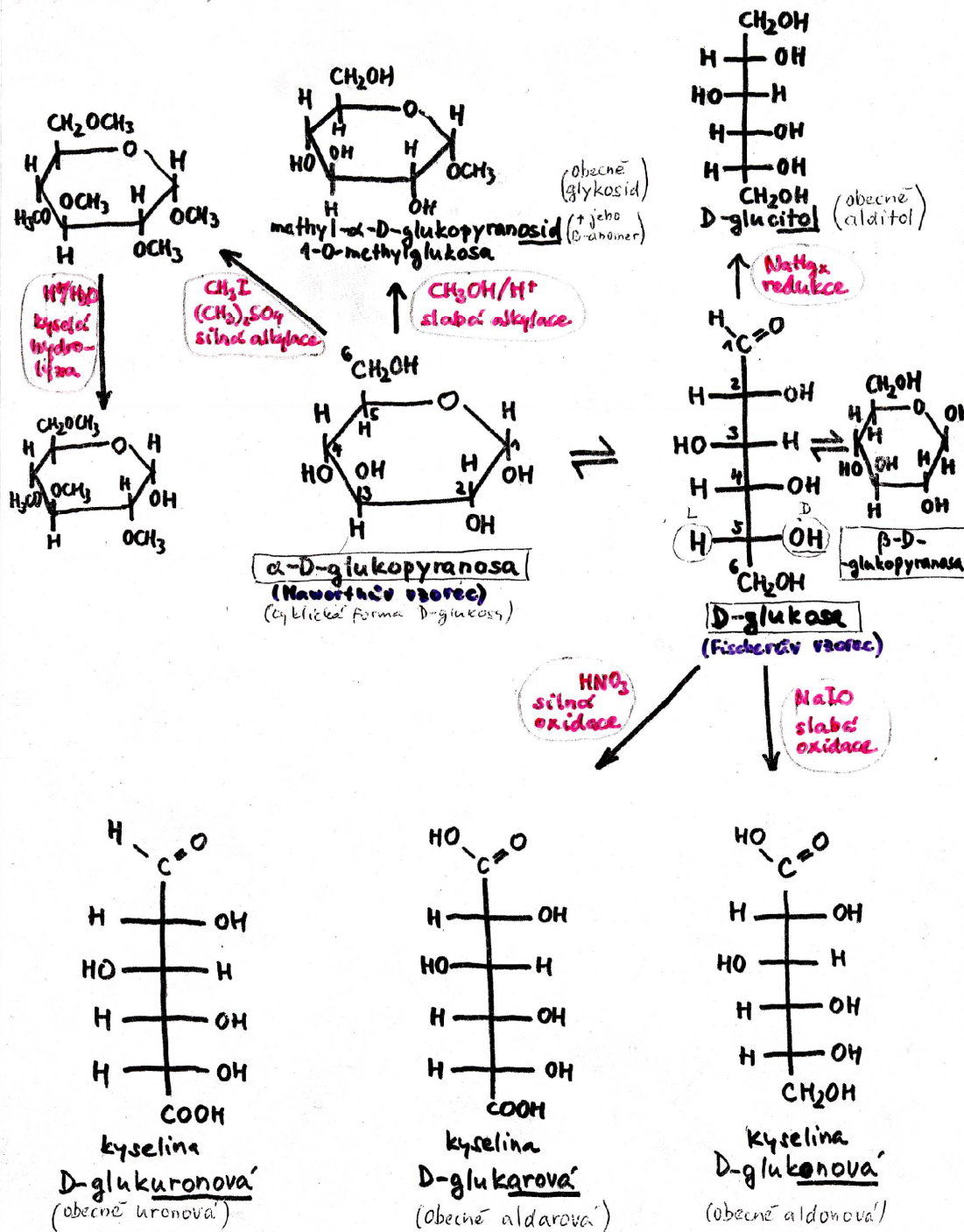
$\beta$  - D - fruktofuranosa



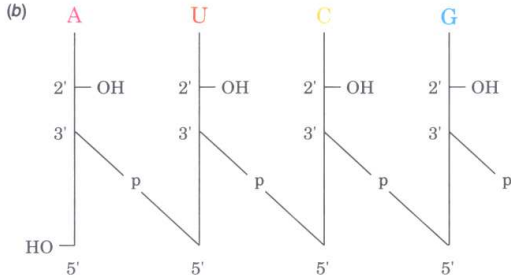
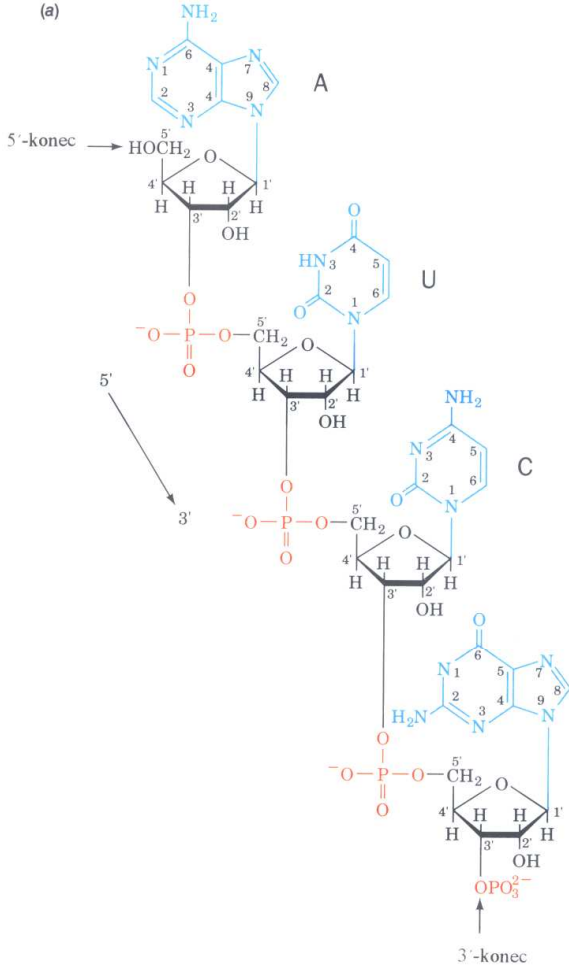
$\beta$ -D-fruktofuranosyl- $\alpha$ -D-glukopyranosid  
(sacharosa)

19.3.2.

# CHEMICKÉ VLASTNOSTI MONOSACHARIDŮ



# STRUKTURA NUKLEOVÝCH KYSELIN







# MAXAM-GILBERTOVA METODA SEKVENOVÁNÍ NUKLEOVÝCH KYSELIN

DETEKCE FRAGMENTŮ SEPAROVANÝCH ELEKTROFORÉZOU  
NA FOSFOIMAGERU

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

