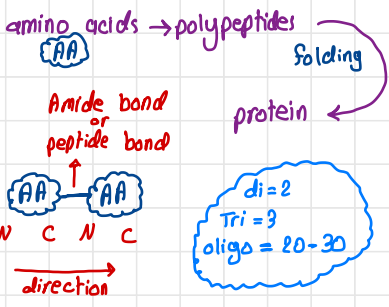


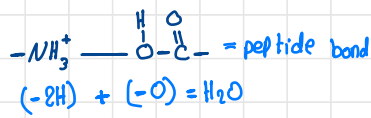
- peptides :-



- amino group is attached to α C
- 1) carnosine: β -alanyl-L-histidine
 - dipeptide
 - to contract
 - it concentrated in brain and muscles
 - protection against ROS and peroxides
 - 2) glutathione: γ -glutamyl-cysteinylglycine
 - ↳ 2C in glutamate
 - very reactive due to **sulfhydryl group**
 - acts as electron donor to **neutralize radicals**.

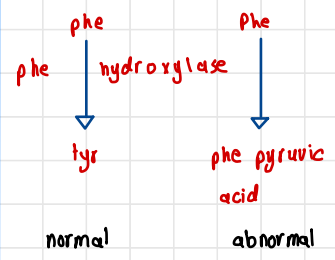
- Aspartame: L-aspartyl-L-phe
- artificial sweetener (200 times sweeter than sugar)
- the carboxylic group of sec amino acid is methylide. stability ↑
- may cause cancer
- D-amino acid is bitter.
- PKU (phenylketonuria) hereditary
- can't metabolise phe

peptide bond: condensation of chemical reaction (dehydration)



scavenges oxidizing agents by reacting with them.

glutathione + glutathione $\xrightarrow[\text{agent}]{\text{oxidizing}}$ glutathione disulfide



* Features:-

- 1) has resonance structure.
- 2) has zigzag structure (it forms semi double bond)
- 3) hydrogen bonding
- 4) strong, rigid, stable, flat SO it doesn't rotate.

3) Enkephalins: Two pentapeptides

- naturally produced in response of pain or stress (pain reliever)
- found in brain

- accumulation of phe pyruvate in CNS
- you have to limit aspartame and substitute by alitame which contains alanine rather than phe.

The End.

* proline is exception, doesn't make hydrogen bond, it can't be hydrogen bond donor.

met enkephalins: Tyr, Gly, Gly, phe, met

leu enkephalins: Tyr, Gly, Gly, phe, leu

- similar to morphine structure.

AlRazi-Node.

- Back bone: N, C, C / side chain: R group (trans configuration)

4) oxytocin and vasopressin.

cyclic structure due to S-S link between two cyst (disulfide bond)

- have amide group at C terminus instead of carboxyl group. stability ↑
- nine residues

اللهم صل وسلم على سيدنا محمد وعلى آله وصحبه أجمعين

* proline is exception, cis and trans have equivalent repulsion. 1:1 cis:trans

oxy → leu, ile

vaso → phe, arg

- has role in muscle contraction
- has role in muscle contraction
- increase water retention & bp

• دعواتكم ♥

Exceptional peptides:-

- 1) Carnosine
- 2) glutathione
- 3) enkephalin
- 4) oxytocin and vasopressin

found in normality