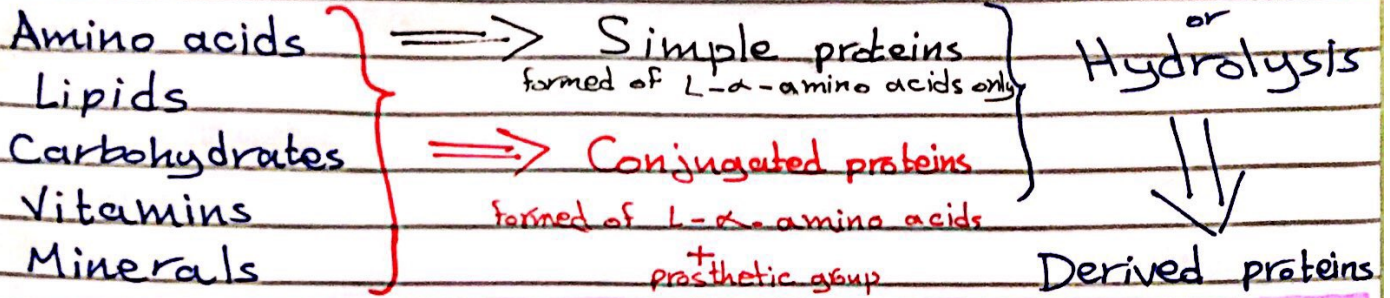


Biochemistry



- # Proteins : Amino acids linked by peptide bonds
- # Biomedical importance : أهمية بيولوجية

Classifications

Nutritional Basis

this classification depends on the amounts of essential amino acids in the protein

Composition

according to the components held upon hydrolysis

Shape

- * Fibrous proteins
- * Globular proteins

Complete protein

adequate amount of all of the essential amino acids

Incomplete protein

lacks one essential amino acids

Poor proteins

lack in many essential amino acids

Notes : The essential amino acids are VITTLyMPH

Valine, Isoleucine, Threonine, Tryptophan, Leucine, lysine, Methionine
Phenylalanine

Complete, Incomplete, Poor $\text{كاملة، غير كاملة، فقيرة}$ $\text{من حيث الأحماض الأمينية}$: أهمية بيولوجية

Classification by Composition

- Simple : Formed of L-α-amino acids only ; Seven types
- Conjugated : Formed of amino acids + Prosthetic group
- Derived : derived From above-mentioned types by hydrolysis or denaturation.

hydrolysis or denaturation

Protein → Peptones → Polypeptides → Short peptide → Amino acids

Simple proteins 7 Types

Type	Albumin	Globuline	Albuminoids	Protamines	Histones	Gliadins + Glutulins
Soluble in	Water	dilute salt	insoluble	water	water	dilute acids and alkalis
Coaguable	✓	✓	X	X	—	✓
Richness	High value	—	—	rich in basic	rich in basic	—

Solubility :

1. Water soluble : Albumin, Protamines, Histones

2. Water insoluble : (3G) : (Globulins) + (Glutulins, Gliadins)
salt dilute acids/bases

3. Albuminoids : insoluble at all

Coaguable : 3G + Albumin

Conjugated proteins classified on the basis of the chemical nature of their prosthetic groups

مجموعة ملاحظات على الجدول

Lipoprotein — Lipid — {
 1. α-lipoprotein (HDL)
 2. β-lipoprotein (LDL)
 3. Pre β-lipoprotein (VLDL)
 4. Non-mobile lipoprotein (chylomicrons)

Hemoprotein — Heme (Iron Porphyrin) — {1. Hemoglobin 2. Myoglobin}

Metaloprotein — Iron — 1. Ferritin 2. Hemosiderin

Flavoprotein — Flavin nucleotides — Succinic dehydrogenase

{ (FMN - FAD)
 active form of
 (riboflavin vitamin B2) }

جميع الملاحظات الواردة أعلاه هي من المادة فقط تم تجميعها
 هنا بفرض التوضيح و الربط بين المحاضرات