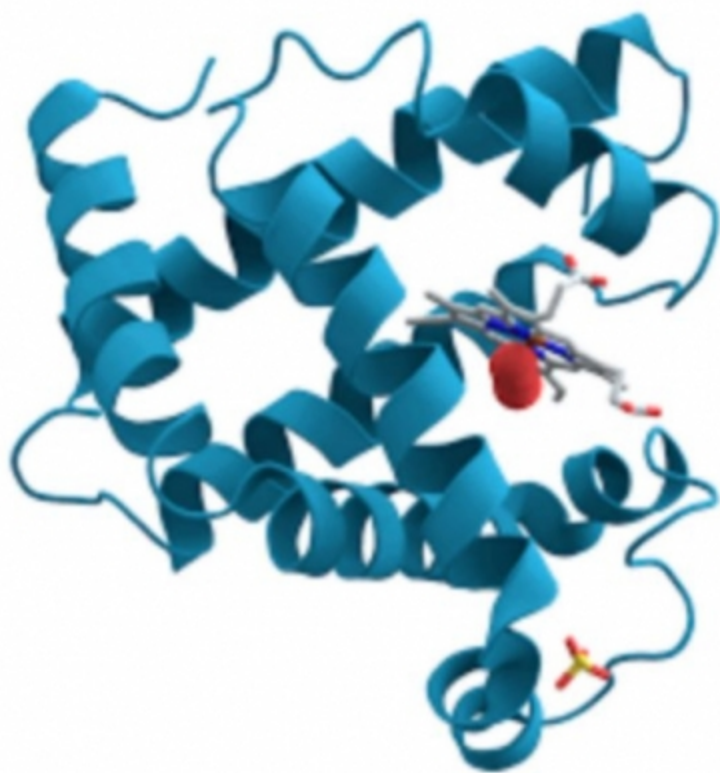


# Proteins



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## Introduction

- Proteins are organic compound of the living system containing C,H,O,N,P,S
- Major function -it is a fundamental basis of structure and function of cell
- Protein found in nail, skin, hair
- Protein are polymer of amino acids
- Made up of amino acid (building block)

## What Are Proteins?

- Large molecules
- Made up of chains of amino acids
- Are found in every cell in the body
- Are involved in most of the body's functions and life processes
- The sequence of amino acids is determined by DNA



## ❖ **Difference between Peptides and Proteins**

- ❖ Peptides can be distinguished from proteins on the basis of size. A peptide is generally believed to have less than 70 amino acids. Proteins usually consist of one or more polypeptides and this gives rise to long chains. Protein can simply be defined as a polymer of amino acids.

## Biological important peptides

- Glutathione
- Thyrotropin releasing hormone
- Oxytocin
- Vasopressin (antidiuretic hormone, ADH)
- Angiotensin

## FUNCTION

### **Structural function-**

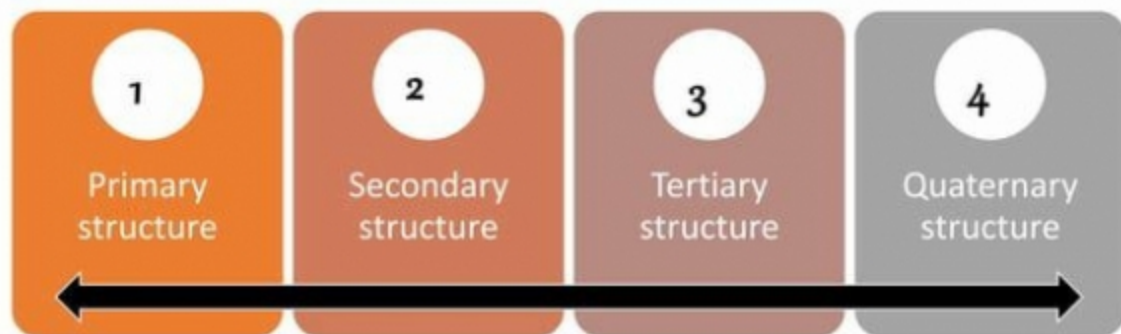
- collagen elastin found in bone matrix, vascular system and other organs
- keratin present in epidermal tissues

### **Dynamic function**

- All enzymes are protein
- Hormones made up of protein
- Help in transport
- Defends against pathogens
- Help in blood clotting

# Structure of the Protein

## Four levels of structure



**Any alteration in the structure or sequencing changes the shape and function of the protein**

## Properties of protein

- Protein exist as colloids in solution
- The protein vary in their molecular wt
- Wide variation in the shape
- Precipitation of protein
- Denaturation of protein