

يَوْمَ يَدْعُ إِلَى تَتَابُعِهِ الَّذِينَ كَفَرُوا خَلَوْا عَنْ قَوْلِ اللَّهِ وَالرَّسُولِ وَمَنْ يَدْعُ إِلَى تَتَابُعِهِ فَلْيَنبَغِ عَلَيْهِمْ وَأَمْ يُلْمِزُ الَّذِينَ كَفَرُوا لَوْلَا نُزِّلَ عَلَيْهِ الْقُرْآنُ مَسْرُورًا

○ assembly of jinn and men! did there not come to you messengers from among you, relating to you My communications and warning you of the meeting of this day of yours? They shall say: We bear witness against ourselves; and this world's life deceived them, and they shall bear witness against their own souls that they were unbelievers.

BIOCHEMISTRY

Role of Biochemistry in Medicine

Dr. Kalsoom Tariq

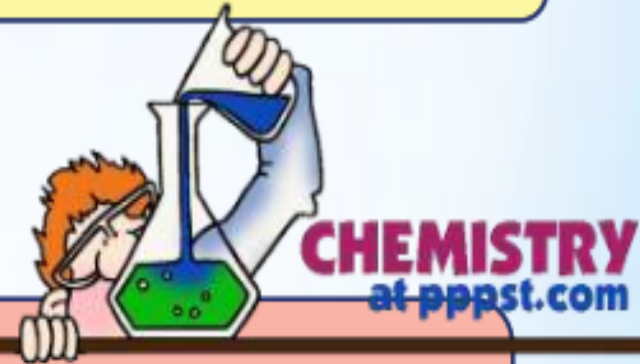
BIOCHEMISTRY

- It is a science concerned with the chemical constituents of living cells and the reactions and processes they under go.
- As long as these reactions take place in organized form , we remain healthy and alive, as disorganization occur in these reactions we fall ill or even die.

STUDY OF THE
STRUCTURE, COMPOSITION, AND CHEMICAL
REACTIONS OF SUBSTANCES IN LIVING
SYSTEMS



BIOLOGY



CHEMISTRY

**BIOCHEMISTR
Y**

BIOCHEMISTRY



DESCRIBE

ORIGIN

FORMATION

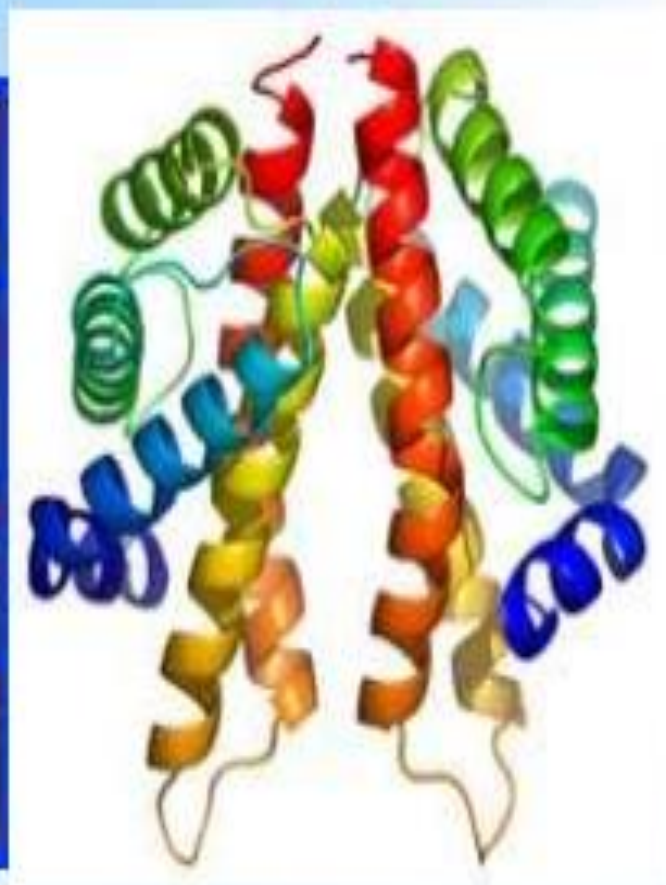
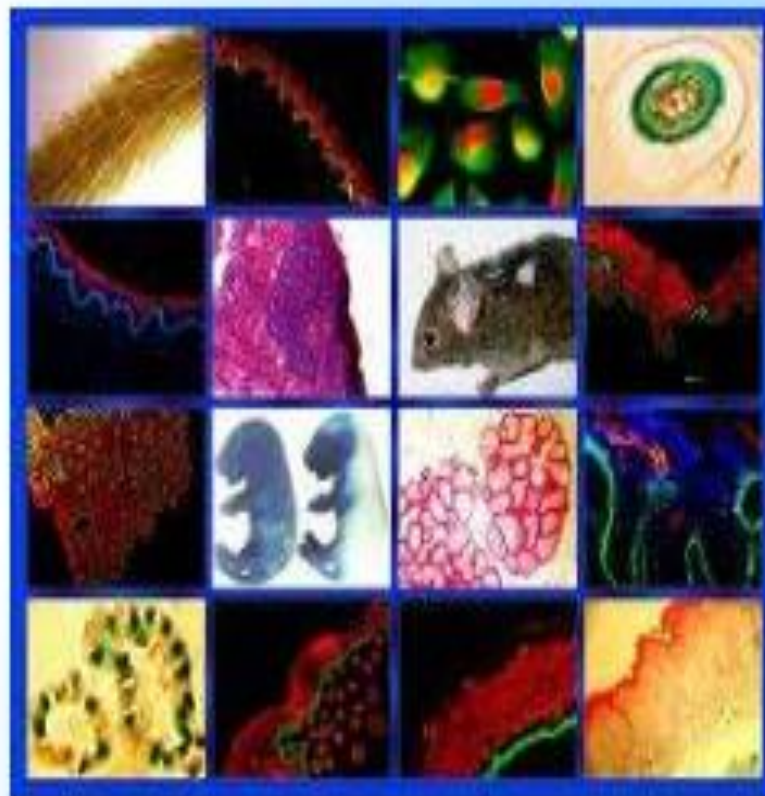
FUNCTION

DEFICIENCY

SYMPTOMS

ENZYMES, CARBOHYDRATES, PROTEINS, DNA, RNA etc

IT TRIES TO EXPLAIN LIFE IN TERMS OF BIO CHEMICAL REACTIONS



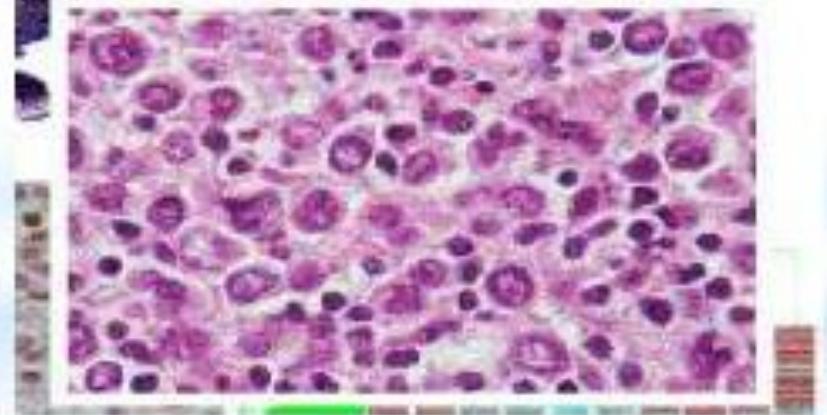
the biochemistry helps us understand the biochemical changes and related physiological alteration in the body



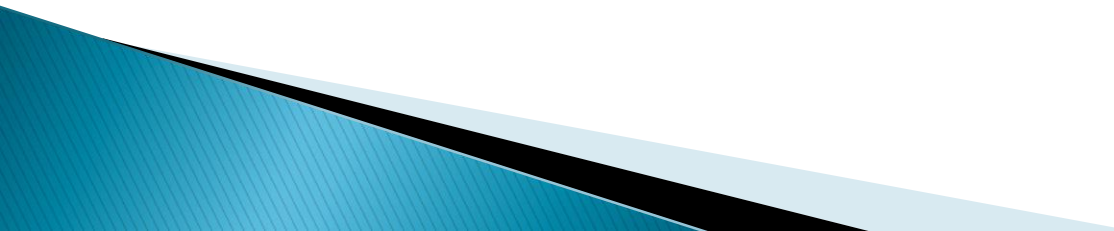
The pathology of any disease is studied through biochemical changes

Pathology

Basis of Diseases



Branches of biochemistry

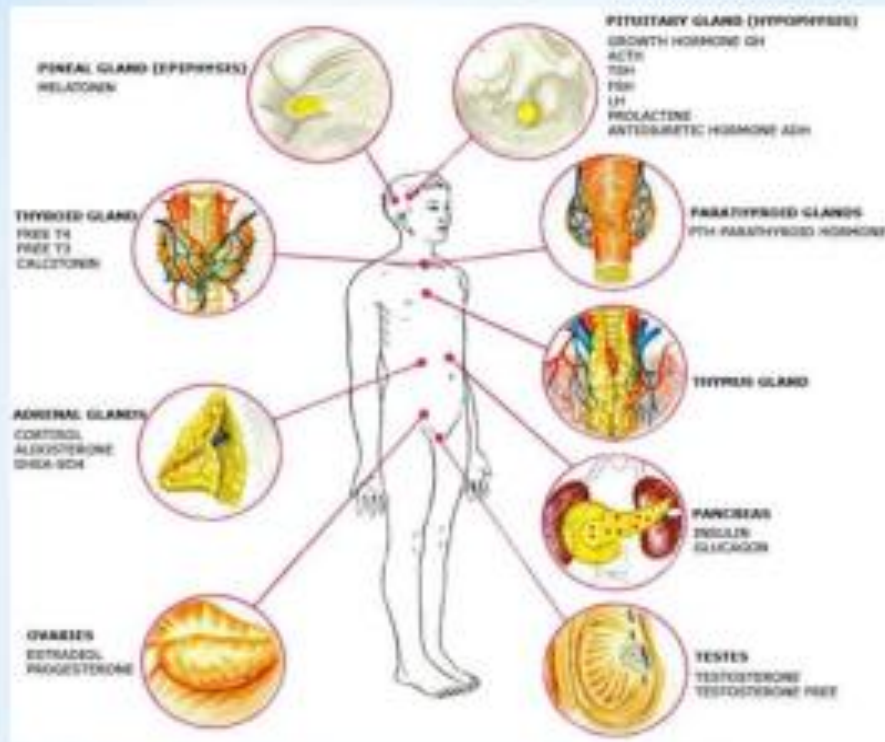
- ▶ Human biochemistry
 - ▶ Clinical biochemistry
 - ▶ Plant biochemistry
 - ▶ Nutrition biochemistry
 - ▶ Industrial biochemistry
- 

in the present scenario many people
rely in taking multivitamin and minerals
for better health



the function and role of the vitamins
is described only by biochemistry

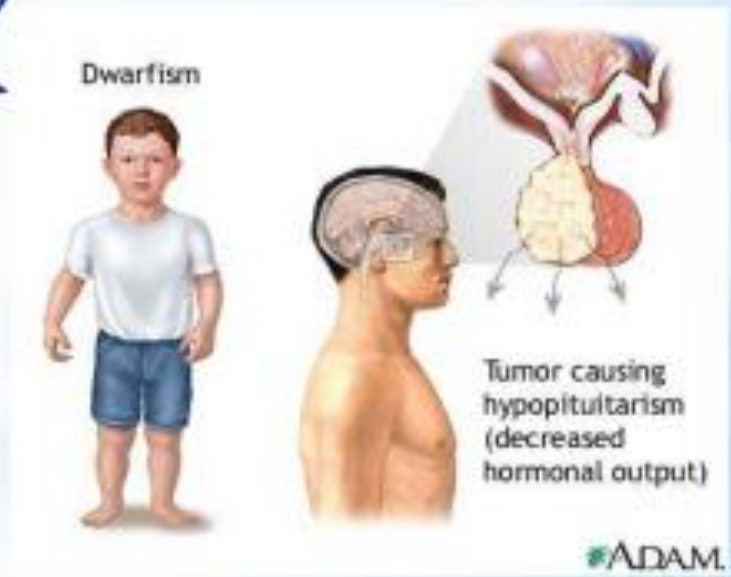




there are many disorders due to hormonal imbalance in specially women and children



the formation of hormones in the normal body function is taught in biochemistry by which the physician can understand the concerned problem during treatment



IMPORTANCE OF BIOCHEMISTRY IN NUTRITION

WATER IS NECESSARY

For a maintenance of health

**Optimum intake of many
chemicals**

**like
vitamins, minerals, es
sential fatty acids**

IMPORTANCE OF BIOCHEMISTRY IN PHARMACY



DRUGS

Gives an idea of its constitution

Its change of degradation with varying temperature

how drugs are metabolized by biochemical reactions in presence of enzymes

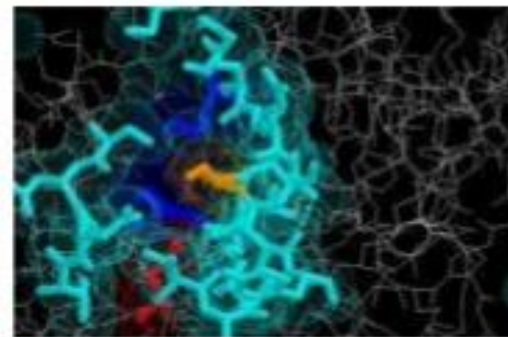
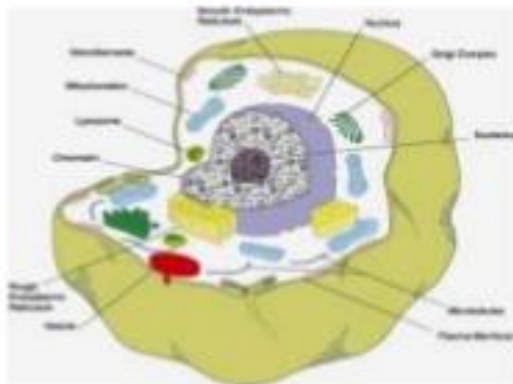
IMPORTANCE OF BIOCHEMISTRY IN MOLECULAR BIOLOGY

It is important to understand biochemistry in order to understand drugs function

example



many drugs exert their influence by altering cell chemistry, or biochemistry



IMPORTANCE IN TREATMENT OF CANCER



many diseases, such as cancer, can be described in terms of biochemical changes in the cell

that lead to changes in gene expression and cell physiology



if you can determine the biochemical changes that led to some disease state



design drugs to target those changes



reverse the disease state and restore health



Gene therapy

BIOCHEMISTRY

Genome project

More efficient food

More efficient drugs



ROLE, IMPORTANCE AND ESSENTIALITY OF BIOCHEMISTRY

- ▶ Biochemistry is essential to understand normal chemistry , metabolism, function and growth of normal human body and to find out abnormal biochemistry of human body in various diseases and clinical conditions.
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