

Chapter -1 Scope of Biochemistry in Pharmacy

Pharmaceutical Biochemistry

- Pharmacy is the field which studies the techniques of preparation of drugs and provides additional clinical services.
- The area of pharmacy is generally divided into three major disciplines, one of which is Pharmaceutics.
- Pharmaceutics is the discipline that studies the effective use of new chemical entities of old drugs into a medication.
- Various drugs are related to the Biochemistry and Metabolism of human health and diseases which is studied by the branch called Pharmaceutical Biochemistry.
- **Drug Constitution:** Biochemistry gives an idea of the constitution of the drug, its chances of degradation with varying temperature, etc.
- How modification in medicinal chemistry helps improve efficiency, minimize side effects, etc.
- **The half-life:** This is a test done on biochemical drugs to know how long a drug is stable when kept at so and so temperature.
- **Biochemical tests:** These tests help fix the specific half-life or date of expiry of drugs.
- **Drug storage:** The storage condition required can be estimated by the biochemical test. For example many enzymes, hormones are stored for dispensing. These get deteriorated over time due to temperature or oxidation, contamination and also due to improper storage.
- **Drug metabolism:** It also gives an idea of how drug molecules are metabolized by many biochemical reactions in the presence of enzymes. This helps to avoid drugs which have a poor metabolism or those with excessive side effects from being prescribed or dispensed to the patient.

Pharmaceutical Biochemistry studies the clinical uses of drugs and their effects on living organisms. It examines chemical processes associated with drug activity occurring in living cells at the molecular level.