



# PHARMACOLOGY

## The Science of Drugs

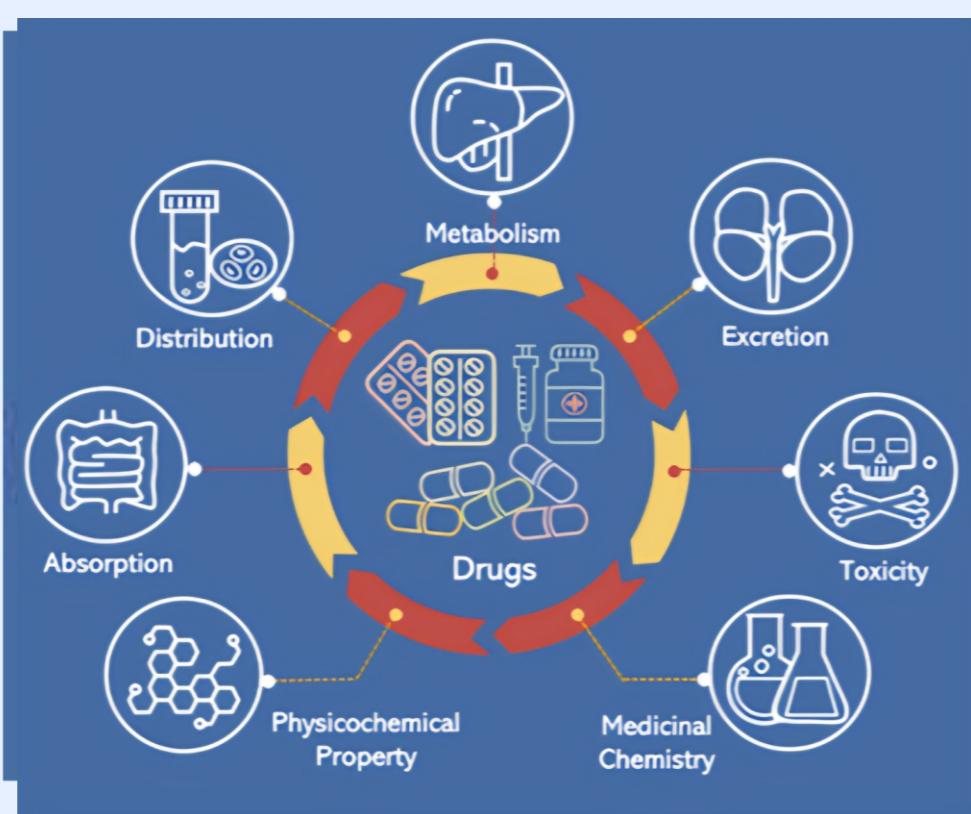
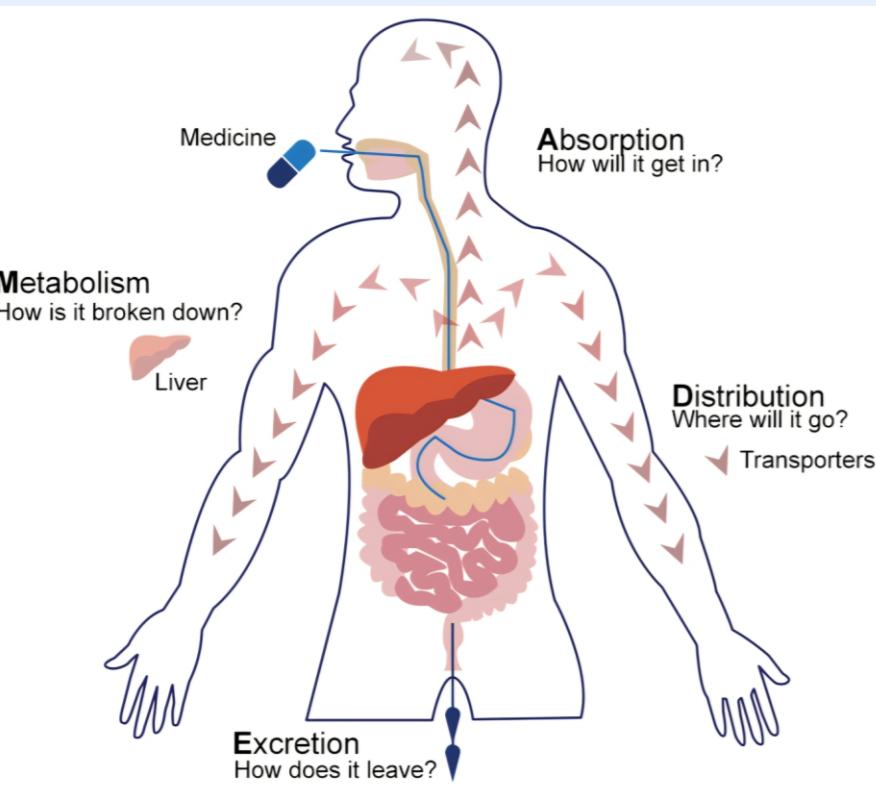


Pharmacology is the study of drugs, their sources, properties, effects, and therapeutic uses

Right drug, right dose, right patient, right time

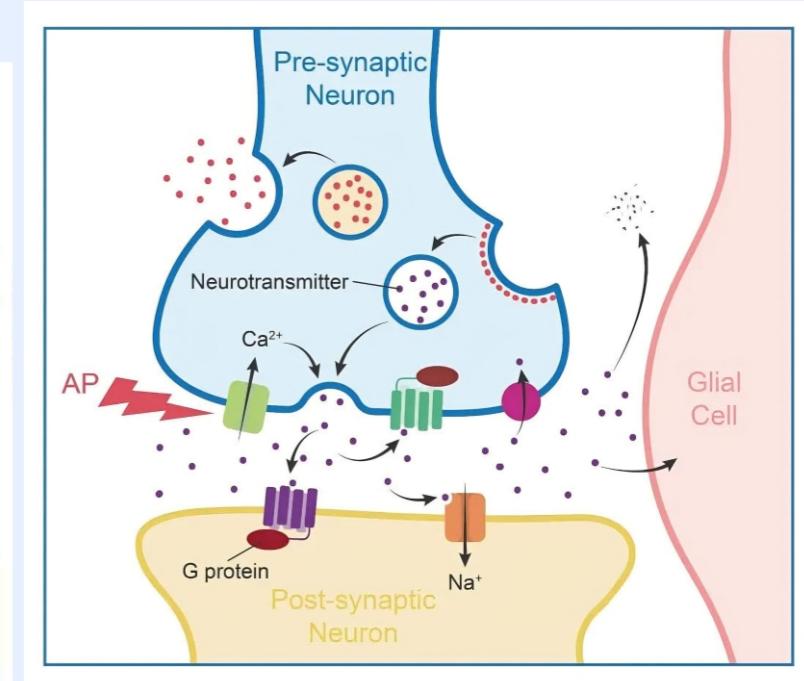
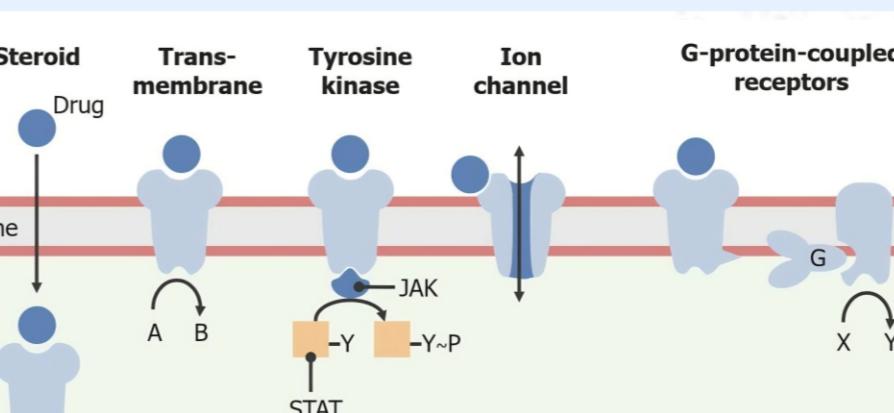
### Pharmacokinetics

What the body does to the drug (ADME), Understanding how drugs are absorbed, distributed, metabolized, and eliminated in the body.



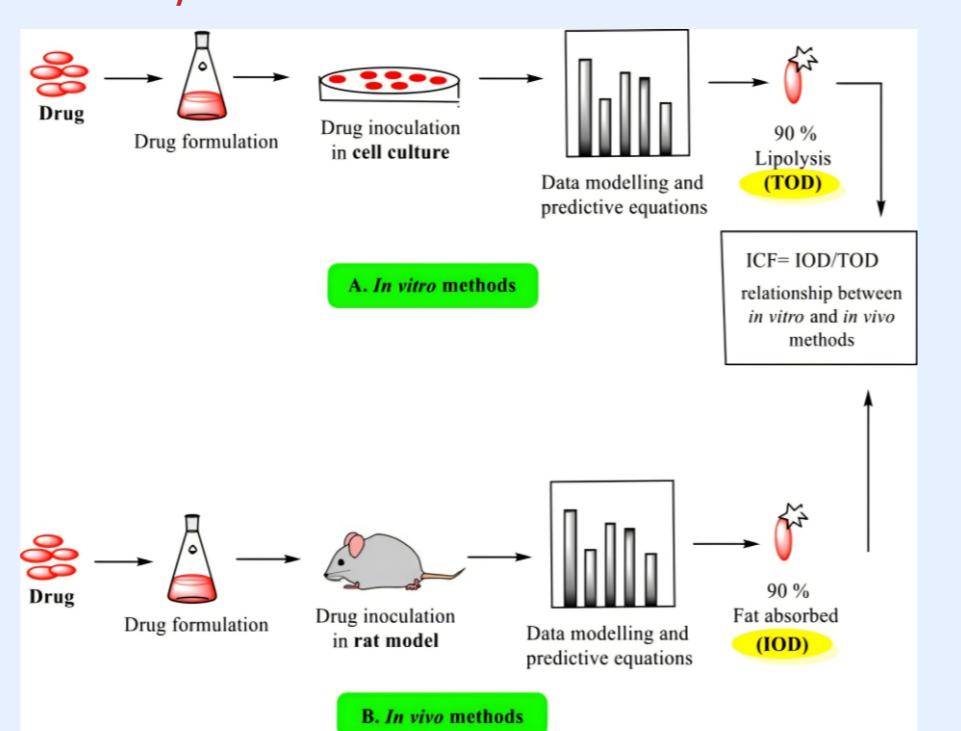
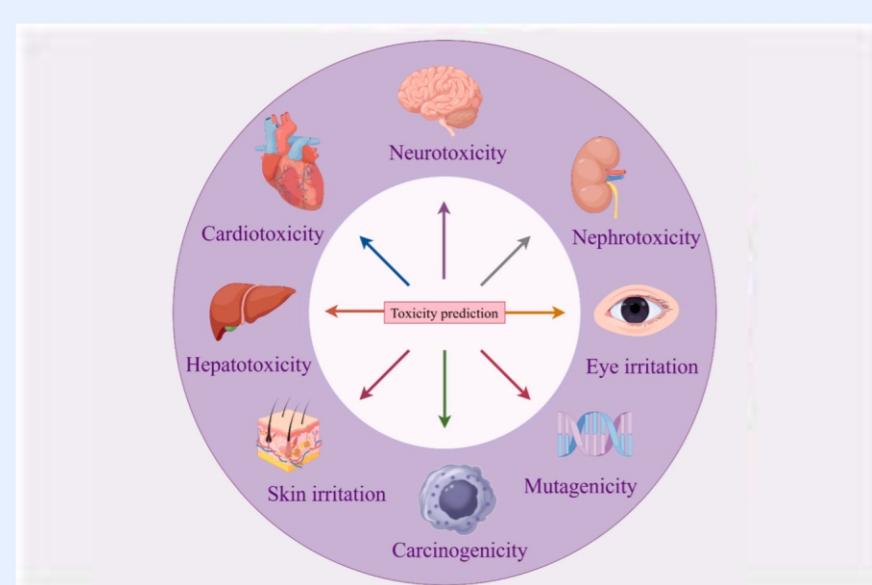
### Pharmacodynamics

What the drug does to the body (Mechanism of action)



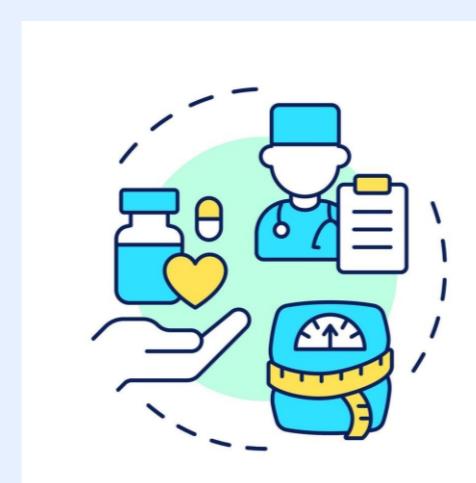
### Toxicology

Study of safe dosage ranges, harmful/adverse effects



### Pharmacotherapeutics

Clinical use of drugs, Focusing on the safe, effective use of medications in patient care



Pharmacology connects chemistry, biology, and medicine to understand how drugs act on biological systems and how the body responds

### Branches & Applications:

#### Clinical Pharmacology

- Focusing on the safe, effective use of medications in patient care.

#### Neuropharmacology

- Studying the impact of drugs on the nervous system, a key area in treating conditions like Alzheimer's, depression, and epilepsy.

#### Psychopharmacology

- Exploring how drugs affect mental health and neurological function.

#### Pharmacogenomics & Pharmacogenetics

- Investigating how genetic variations influence drug response, helping to tailor personalized medicine.

Modern pharmacology supports drug discovery, personalized medicine, and safety evaluation