

Pharmacology / L-1

→ it is the science that deals with interaction of drugs with living systems

Drugs: These are chemical substances that show biological activity (treatment or diagnosis)

Divisions of pharmacology

Pharmacodynamics
(what the drug does to the body)

- this deals with the action of drugs on living tissues:
- type or quality of action
 - quantitative aspect
 - mechanism of action
 - adverse effects and safety
 - The main organ or tissue on which the drug acts, and for which it is used therapeutically is called target organ or tissue of drug action.

Pharmacokinetics

(what the body does to drug)

- This includes
- ① administration & absorption
 - ② distribution inside body
 - ③ elimination by metabolism or excretion.

OTHER TOPICS LINKED WITH PHARMACOLOGY

Pharmacotherapeutics

- concerned with the proper use of drugs in treatment of diseases in man.

Chemo therapy

- it is used to imply the use of drugs to inhibit growth or kill either

- a. microbes (anti-microbial agents)
- b. Cancer cell (cyto-toxic anti cancer drugs)

Toxicology

- it is the science that deals with the harmful effects of chemicals (including drugs)

Clinical pharmacology

- Drug pharmacology clinical evaluation of drug in treating diseases in man. Done by
 - a. clinical trials
 - b. Surveillance studies

Pharmacy

- it is the science and profession that is

concerned with the:

- a) preparation
- b) storage
- c) dispensing
- d) proper utilization of drug products.

DRUG SOURCES

Synthetic
(Common at present)
→ these drugs are prepared by the Labs or factories of greatly assist in discovery of New drug.

Semi-synthetic **Natural**
→ these are obtained from natural sources but are modified by pharmaceutical industry in order to improve their physical or chemical properties or pharmacological activity.

Natural Sources (Less used now)

organic

Non-organic

Plants

Animals

microbes

→ **metals**

(platinum, zinc)

→ **Non-metals**

(sodium chloride)

and magnesium

sulfate)

→ any part of plant.

→ these may include either proteins, oils, enzymes from (exocrine gland hormone).

like: Fungi & Bacteria which are sources of antibiotics.

→ pharmacognosy (drug come from plant and animal)

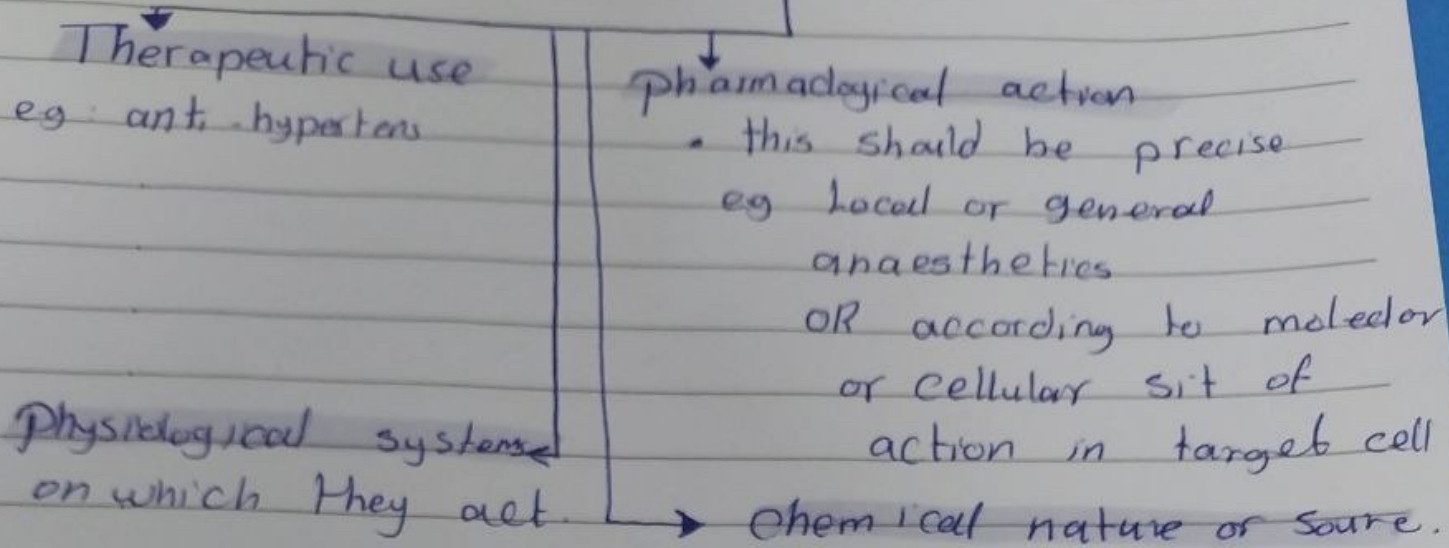
ex: alkaloids, tannins, gums

vaccines, ant-sep and some vitamins

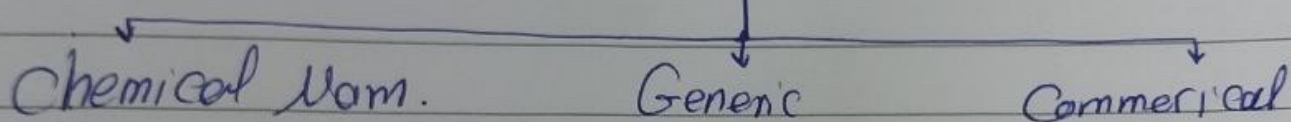
OT
★ **Alkaloids**: are small organic molecules contain N
eg (atropine, morphine, caffeine, theophylline, quinine)

(not Fixed Roll)

DRUG CLASSIFICATION



DRUG NAMES.



Types of drug dose Forms.

- oral
- Topical
- Inhalational
- Suppository
- parenteral

Thank you.