

“One of the features which is thought to distinguish man from other animals is his desire to take medicines”

(Sir William Osler, 1849-1919)



Definitions

- **Pharmacology** is the science of the interaction of chemicals with living systems at all levels
- **Pharmacokinetics** investigates the effects of the biological system on drugs (absorption, distribution, elimination...)
- **Pharmacodynamics** describes the fundamental action of a drug on a physiological, biochemical or molecular level
- **Pharmacogenetics** examines the effects of genetic factors to variations in the drug response ("Asian Flush", Codeine "resistance")
- **Toxicology** studies the undesirable effects of chemicals on living systems (includes poisons, antidotes and unwanted side effects of drugs)
- **Pharmacy** is the art of preparing, compounding and dispensing chemicals for medicinal use

Definitions

- **Prophylactic** refers to a drug or procedure aimed to prevent disease
- **Palliative** refers to a drug or procedure aimed to relieve symptoms
- **Therapeutic** refers to a drug or procedure aimed to cure disease
- **Tolerance** is the increased resistance to the usual effects of an established dose of a particular drug
- **Effective dose (ED50)** is the concentration at which 50% of the subject show a predefined response
- **Efficacy** refers to the inherent capability of a drug to produce a desired effect
- **Potency** compares the relative effectiveness of drugs to produce a desired effect

e.g. Drug A requires fewer milligrams than Drug B to achieve the same pharmacological response
--> Drug A has the higher potency, yet, both drugs have the same efficacy.