

# VIRUS

General Characteristics

- Obligate, Intracellular host specific parasite
- DNA or RNA as genetic material
- Acellular, sub microscopic
- Passes through bacterial filter
- no motility
- resistant to antibiotics

Transmission

- Insects
- Nematodes
- Mechanical injury
- Plant Propagules
- Seeds

Viral Diseases

- Animal Diseases
  - Few E.g. Foot and Mouth, Ranikhet, Avian Flu, Rinderpest
- Plant Diseases
  - Few E.g. Potato Leaf Roll, Tobacco Mosaic, Apple Mosaic, Banana Bunchy top, Papaya Leaf curl
- Human Diseases
  - Few E.g. Measles, Chicken Pox, Poliomyelitis, Rabies, SARS, COVID-19, Herpes, Dengue, AIDS, Hepatitis

Classification

Based on Genetic material

Based on Host

Deoxyvira (DNA Virus)

Ribovira (RNA Virus)

Phytophagineae

Zoophagineae

Mycophage

Cyanophage

Bacteriophage

- Basic Shapes
- Helical (Elongated)
  - Cuboidal
  - Binal
  - Polyhedral
  - Cubical
  - Spherical
- May be

Double Stranded (dsDNA)

Single Stranded (ssDNA)

Coliphage  $\Phi$  x174

Single Stranded (ssRNA)

Double stranded (dsRNA)

Polio Virus

HIV

Rabies Virus

Measles Virus

TMV

Reo Virus

Mycophages

Coliphage T1, T2, T3.....

Herpes Virus

Hepatitis B Virus

Chicken Pox Virus