

By: Dr. Umesh Kumar

Semester - I, MIC - I (Microbiology)

Ques- white is virus | describe its history in brief.

Ans:- Various definitions of viruses have been given. Some of these are as follows:-

i) Virus is a genetic element enclosed in a protein coat

ii) Virus is a core of nucleic acid either DNA or RNA surrounded by a protein coat.

iii) Virus is the smallest unit showing reproductive property considered typical of life.

iv) Virus is an obligate parasite, too small to be seen.

v) Virus is a submicroscopic entity capable of being introduced into specific living cells and of reproducing inside such cell only.

vi) Virus is contagium vivum fluidum (i.e. living fluid infectant).

History

(2)

In 1886, Adolf Mayer described Tobacco mosaic disease but he could not find casual agent. Credit for the discovery of virus goes to Russian botanist Dmitri Iwanowsky (1892), who found the cause of mosaic disease of tobacco. He reported that the sap of infected plant filtered through bacteria proof filters was equally potent in causing the disease and concluded that the cause of disease was not bacterium but some

smaller particle known as virus.

In the years that followed other "filterable viruses" were discovered that were responsible for infections in plants, animals and bacteria. Bacteriophages (viruses infecting bacteria) were discovered by Twort (1915) and d'Herelle (1917). Saffermann and Morris (1963) discovered cyanophages that cause infection in blue green algae). In 1935 Stanley crystallized TMV and showed that crystals retained their infectivity even when indefinitely stored in a bottle.

Bowden and Pierie (1937)

studied chemical nature of TMV particles and reported that it is nucleoprotein.