

Microbiology

- **Introduction**
- Microbiology is the branch of science dealing with microorganisms.
These include:
 - Bacteriology: the study of bacteria
 - Mycology: the study of fungi
 - Protozoology: the study of protozoa
 - Phycology: the study of algae
 - Virology: the study of viruses

Importance of Microbiology

- It is an applied science
- Help health and medicine
- Agriculture
- Help to protect environment
- Biotechnology industries.

History of Microbiology

- **Abu Bakr El-Razi.**
 - * He was the first scientist difference between the "smallpox" and "measles", and presented a detailed description of the two diseases, and symptoms of each.
- **Abu El-kasim El-Zhrawy.**
 - * He is Arabian Scientist, excelled in the field of medicine.
 - * He wrote a medical encyclopedia and wrote books on open abscess, symptoms and treatment, which are the microbial diseases.
- **Robert Hooke.**
 - * In 1660 Robert Hooke was the first person to use a microscope.
 - * He studied plant sections and found tiny cylindrical-like structures he called cells .
 - * He published a book Micrographia
 - * Later researchers saw such structures in all types of living organism.
 - * Today it is considered to be a foundation stone in the
 - * understanding of microbiology.
- **Marcello Malpighi and Antonie Van Leeuwenhoek**
 - * In Europe,1660s, Marcello Malpighi and Antonie Van Leeuwenhoek used microscopes to see animal and plant tissue

- * Van Leeuwenhoek examined a drop of rainwater and noticed it contained tiny creatures he called "*animalicules*". These were bacteria.
- * van Leeuwenhoek became the first person to study bacteria.
- **Edward Jenner**
 - * In 1796 Jenner injected James Phipps with cowpox.
 - * The boy did not develop smallpox
 - * Jenner became famous as a result.
 - * It was from this beginning that the science of immunization developed.
- **Ferdinand J Cohn**
 - * He in 1875 effectively founded the science of bacteriology
 - * His main contribution was the classification of bacteria, and he used the term *Bacillus*.
- **Louis Pasteur**
 - *He developed the germ theory of disease i.e weak microbes when injected in the body can control the disease
 - *He successfully showed that life can only be generated from existing life
 - *He also showed that fermentation - a process used in baking was caused by microorganisms
 - *Develpoed vaccinations for Rabies and Chicken cholera

- *He developed the process for sterilizing milk and this was named after him - ***pasteurization***.
- *The term ***virus*** (poison) was used by Pasteur. N