

# Nutrition of Bacteria

- ✓ To provide energy
- ✓ To make cellular components
- ✓ To develop
- ✓ To reproduce
- ✓ Bacteria must feed in order to survive

# Nutrition of Bacteria

- Inorganic (O<sub>2</sub>, CO<sub>2</sub>, C, N, Water etc.)
- Organic (Vitamins)
- **Classification according to diet**
  - **Source of carbon**
    - Autotrophic (microorganisms using inorganic carbon: chemoautotroph, photoautotroph)
    - Heterotrophic (m.o using organic carbon)
  - **Source of energy**
    - Chemical energy (chemolithotroph, chemorganotroph)
    - Luminous energy (phototroph: photolithotroph, photoorganotroph)
  - Source of H/e (chemolithotroph, chemorganotroph)

# Type of symbiosis in Organisms

- Mutualism: Mutual advantage. *L.plantarum*-*E.feacalis*
- Commensalism: +/- . *E.feacalis*-*E.coli*
- Synergism
- Antagonizm
- Parasitism
- Opportunism
- Competition

# Enzymes of Bacteria

- Endoenzyme
- Exoenzyme
- Apoenzyme+Koenzyme  
→ Holoenzyme
- Nomenclature
- Cofactor (preenzim)
- Oksido-reduktase
- Transferase
- Hidrolase
- Izomerase
- Lyase-Ligase
- Structural enzymes
- Inducible enzymes
- Activation of Enzymes
  - Chemical factors
  - Temperature
  - pH
  - Concentration of Substrate
  - Concentration of Enzymes
  - Concentration of salt
  - Others