

BACTERIOLOGY

Study of bacteria and
infection of disease

VIROLOGY

Study of viruses and
infection of diseases

MEDICAL MICROBIOLOGY

Study the infection mech
method of diagnosis
specific therapy
prophylaxis of infection
diseases

MICRO BIOLOGY

MYCOLOGY

The study of fungi and
pathogenic

MICROBES

minute organism invisible
to naked eye

MICROORGANISIM

PARASITOLOGY

Protozoology
the study of parasites and
pathogenic

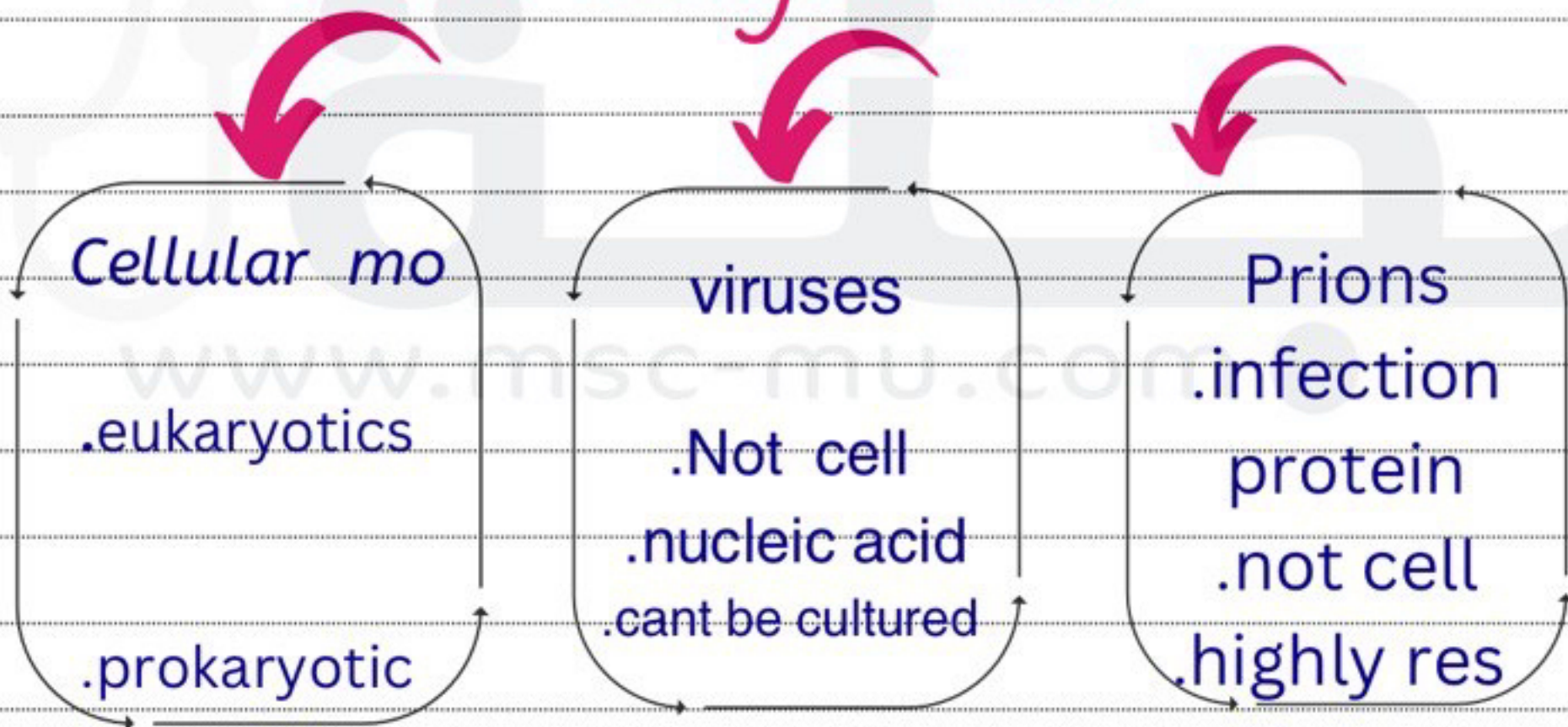
Important microorganism : 1. Bacteria

2. viruses

3. Fungi

4. Parasite

Microorganism



Naming of Mo:

Genus ,capital letter

species, small later

Bacteria clasification :-shape

-ultra structure

1. cocci* spherical* round;

micrococci-single

MICROCOCCUS DIPLOCOCCUS STREPTOCOCCUS



diplococci-pairs of cell

streptococci-chain or rod

staphelocooci- irregular cluster or

grape chain

tetracoccuc-sequar or four

scarcinae-cuboidal

TETRACOCCUS

SARCINA

STAPHYLOCOCCUS



About shape

BACILLUS

COCCOBACILLUS

DIPLOBACILLUS

2. bacillus *rod* stick.



flagellated or non-flagellated

monobacillus

diplobacillus

streptobacillus (chain)

STREPTOBACILLUS

PALISADES

palisade (very rare)



3. spiral *helical* coil

flagellated

SPIRILLUM



4. vibriob *comma

flagellated

cholera

3. siprochete

SPIROCHETES

length > diameter

more flexible



*Ultra structure

Externa cell wall

Internal cytoplasm membrane

- Cell wall
- capsule
- pili
- flagella

- cytoplasm
- ribosom
- mesosome
- plasmid
- DNA

cell wall~shape & very rigid & preventing from bursing (osmoticlysis). & Resistance highly pressure & growth cell and division

Positive gram

- Inner plasma mem
- thick peptidoglycan
- easy treat
- purple * violet
- 90-80% peptide

Negative gram

- inner plasma mem
- thin peptidoglycan
- outer plasma mem
- red * pink
- 5-10% peptide

flagella (basal body * hook * filament)

protein flagellin

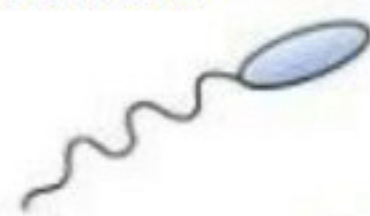
-not flagella-atricho

one flagella-monotrichous

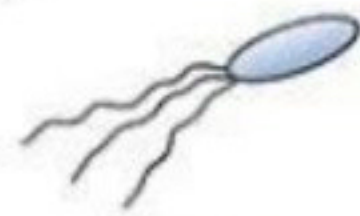
around flagell-peritrichous

more and one place-lophotrichous

two and two places-amphitrichous



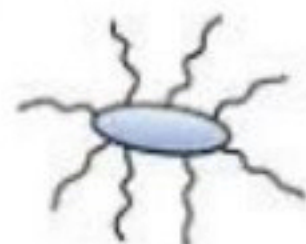
Monotrichous



Lophotrichous



Amphitrichous



Peritrichous

pilli *small hair

neg grame

100-500 pilli

attachment to supstratum (somatic pilli)

transfer DNA (sex pilli)



fimbria

short pilus* attacment pilli

all type of bacteria

