

Bacteria	0.2 - 1.5 by 3.5 μm	prokaryotic	unicellular	grow on artificial laboratory media	asexual	<ul style="list-style-type: none"> * Cause diseases in human, animals & plants * infect microorganism
Viruses	0.015 - 0.2 μm	---	---	don't grow on artificial laboratory media	---	<ul style="list-style-type: none"> * Cause diseases * used as food supplement * manufacture of alcohol
Fungi (Yeast)	5.0 - 10.0 μm	Eukaryotic	unicellular	Grow on artificial laboratory media	asexual or sexual	<ul style="list-style-type: none"> * cause diseases * industry production like antibiotics. * decomposition
Fungi (Molds)	2.0 - 9 μm by several mm	Eukaryotic	multicellular	Grow on artificial laboratory media	sexual or asexual	<ul style="list-style-type: none"> * cause diseases * food for aquatic animals.
Protozoa	2.0 - 200 μm	Eukaryotic	unicellular	some grow on artificial media	sexual or asexual	<ul style="list-style-type: none"> * produce toxic substances * production food * photo synthetic
Algae	10 μm - several centimeters	Eukaryotic	unicellular or multicellular	---	sexual or asexual	<ul style="list-style-type: none"> * produce toxic substances * production food * photo synthetic

2 Transition period

↳ disapproved the theory of spontaneous generation

spontaneous generation → a body of thought on the ordinary formation of living organisms without descent from similar organism

A. Redi

↳ ? → where do maggots come from

↳ Hypothesis → Maggots come from flies

↳ Redi put meat into 3 separation jars

* Aristotle ⇒ flies & Mice recipe

3 Golden period

A. Louis Pasteur (Father of Microbiology)

↳ anaerobic fermentation by Bacteria (Acid) & yeast (alcohol)

↳ prevent spoilage of wine by bacteria

↳ sterilization techniques

↳ steam sterilizer

↳ autoclave

↳ hot-air oven.

↳ Studies on Anthrax & cholera.

B. Robert Koch

↳ use solid media for isolation.

↳ Koch's postulates (one microbe, one disease)

↳ Discovered Anthrax bacillus, T.B, Cholera vibrios.

4 Molecular Biology period

A. Dimitri Ivanowski (virology)

↳ 1st evidence of the filterability of pathogenic agent

↳ tobacco mosaic disease

B. Alexander Fleming

↳ 1st paper describing penicillin

↳ produced by mold penicillium

↳ its effect on gram +ve micro-

↳ mold contaminating ~~eat~~ the culture

↳ Antibiotic Era a major revolution in public health