Bacteria
Papercraft



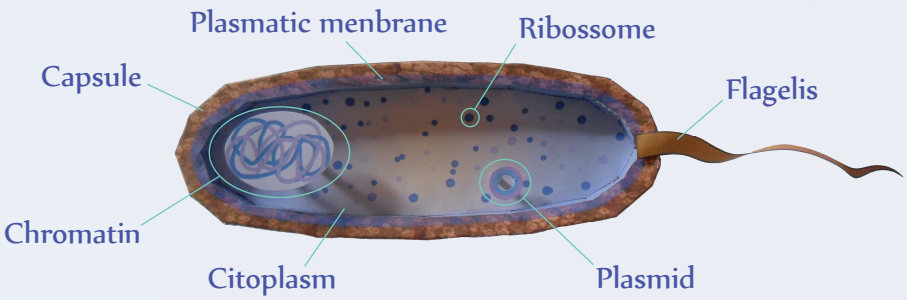
E. coli (Gram +)
model

Bacteria are a large domain of prokaryotic microorganisms, are single-celled organisms aclorofilados, microscopic, that are produced by binary fission. . Typically a few micrometres in length, bacteria have a wide range of shapes, ranging from spheres to rods and spirals. In most species, the protection of the cell is made of a layer extremely tough cell wall, with just under a membrane that encloses a single cytoplasmic compartment containing DNA, RNA, proteins and ribosomes.

Bacteria are small and can multiply quickly, simply dividing by binary fission. Bacteria are present in most habitats on Earth, growing in soil, acidic hot springs, radioactive waste, water, and deep in the Earth's crust, as well as in organic matter and the live bodies of plants and animals, providing outstanding examples of mutualism in the digestive tracts of humans, termites and cockroaches. There are typically 40 million bacterial cells in a gram of soil and a million bacterial cells in a millilitre of fresh water; in all, there are approximately five nonillion (5×1030) bacteria on Earth, forming a biomass that exceeds that of all plants and animals. Bacteria are vital in recycling nutrients, with many steps in nutrient cycles depending on these organisms, such as the fixation of nitrogen from the atmosphere and putrefaction.

When food is plentiful, "the survival of the fittest" generally means the survival of those that divide quickly. Under proper conditions, a simple prokaryotic cell can divide every 20 minutes, giving rise to 5 billion cells (approximately equal numbers to the human population of the earth) in just under 11 hours. The ability to divide quickly enables populations of bacteria to adapt to the changing environment. Under laboratory conditions eg a bacteria population maintained in a vat evolves within a few weeks by natural selection for mutations using new types of sugars as carbon source and energy.

Two groups of distantly related bacteria are recognized:
- The eubacteria, which are the common types found in water, soil and higher organisms.
- The arquibactérias, which are found in inhospitable environments really like swamps, hot springs, deep ocean, salt, volcanoes, acidic source, etc.. Despite its relative simplicity, bacteria are the oldest beings who have stories and are also the most abundant inhabitants of the earth.



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