Question #57732, Biology Human Anatomy and Physiology

Bacteria are single-celled, prokaryotic microorganisms that exist in abundance in both living hosts and in all areas of the planet. A virus is acellular (has no cell structure) and requires a living host to survive. Bacteria are alive, while scientists are not yet sure if viruses are living or nonliving.

Comparison chart

Feature	Bacteria	Virus
Living attributes	Living organism	Opinions differ on whether viruses are a form of life or organic structures that interact with living organisms
Number of cells	Unicellular; one cell	No cells; not living
Ribosomes	Present	Absent
Cell wall	Peptidoglycan / Lipopolysaccharide	No cell wall. Protein coat present instead
Reproduction	Fission- a form of asexual reproduction	Invades a host cell and takes over the cell causing it to make copies of the viral DNA/RNA. Destroys the host cell releasing new viruses
Structures	DNA and RNA floating freely in cytoplasm. Has cell wall and cell membrane	DNA or RNA enclosed inside a coat of protein
Enzymes	Yes	Yes, in some
Size	Larger (1000nm)	Smaller (20 - 400nm)