

KEY WORDS AND PHRASES FOR STRUCTURES WITHIN THE CYTOPLASM CONCEPT MAP

A process in which an organism transfers genetic material to another cell that is not its offspring.

Bacterial genomes contain a high frequency of unmethylated cytosine-guanine dinucleotide sequences that are recognized as PAMPs.

Consists of multiple layers of resistant coats (including a cortex, a spore coat, and sometimes an exosporium) surrounding a nucleoid, some ribosomes, RNA molecules, and enzymes.

Codes for the synthesis of a few proteins not coded for by the nucleoid.

DNA determines what proteins and enzymes an organism can synthesize and, therefore, what chemical reactions it is able to carry out.

Dormant alternate life forms produced by the genus *Bacillus*, the genus *Clostridium*, and several other genera of bacteria.

Endospores can survive possibly thousands of years until a variety of environmental stimuli trigger germination, allowing the outgrowth of a single vegetative bacterium.

Enzymes called DNA topoisomerases are essential in the unwinding, replication, and rewinding of the circular, supercoiled bacterial DNA.

Fluoroquinolones inhibit DNA topoisomerase enzymes needed for bacterial nucleic acid synthesis.

macrolides and tetracyclines

No nucleoli.

Obligate anaerobes often found as normal flora of the gastrointestinal tract in animals.

Ribosomal RNA (rRNA) and protein.

Serve as a workbench for protein synthesis - (they receive and translate genetic instructions for the formation of specific proteins.)

Small, non-chromosomal, circular DNA molecules.

tetanus, botulism, gas gangrene, anthrax

The nucleoid is not surrounded by a nuclear membrane.

Transposons are able to cut themselves out of a bacterial nucleoid or a plasmid and insert themselves into another nucleoid or plasmid and contribute in the transmission of antibiotic resistance among a population of bacteria.

Transposons that can carry multiple gene clusters called gene cassettes that move as a unit from one piece of DNA to another.