

Molecules found in nature useful in biotechnology

E.coli	Rapidly reproducing prokaryote.
Human Insulin Gene	DNA sequence required to produce Insulin (protein).
Restriction Enzyme	A protein found in bacteria that defends against bacteriophage virus by cutting virus DNA at specific short sequences.
DNA Ligase	During DNA replication along the lagging strand of each replication bubble, the newly-made Okazaki fragments need to be fused (covalently bonded). This covalent fusing is performed by DNA ligase.
Reverse Transcriptase	In a retrovirus such as HIV, the virus's RNA genome is "reverse transcribed" into DNA, which is subsequently inserted into the host cell's nuclear DNA.
Transformation	Bacteria can acquire new genetic material in 3 different ways, one of which is "transformation," wherein DNA is directly absorbed into the cell.
Plasmid	While most of a bacterium's genetic material is a fairly large circle of several million bases, a few "extra" genes (some antibiotic resistance genes, for example) are found in separate little circles of only a few thousand bases called plasmids. Plasmids are copied each time a bacterium divides.
Recombinant DNA	DNA generated from segments of two or more different DNA molecules
Taq DNA polymerase	Heat stable DNA polymerase found in <i>Thermus aquaticus</i>, a bacterium that lives in hot places such as geysers