## Nanotechnology in research.

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## ABSTRACT

The concept of nanotechnology was first coined by Richard Feynman in 1959. Nanotechnology refers to manipulation of material at a scale of individual atoms and molecules. Use of specialized bacterium sized "assembler" devices; it permits a programmable control of molecular structures. Definition: Nanotechnology represents a biological process to the manufacture of pharmaceutical and other goods. Nanorobots are nanodevices that will be used for the purpose of maintaining and protecting human body against pathogens. They will have a diameter of about 0.5 to 3.0 microns and with a dimension of 1 to 100 nanometres. The powering of these nanorobots will be done by metabolizing local glucose and oxygen for energy. There are two types of applications-Diagnostic and Therapeutic. Improved Imaging of human body, Nano tracking for tumour detection, Quantum dots emitting wavelength depending upon its size are diagnostic applications. These nano devices can be inhaled directly to lung, which then enters the alveolar duct. There are many therapeutic applications like, Delivering medicine, For example, Organic dedrimers (artificial delivering molecule), hollow polymers (gold coated glass beads), Bc12 family of proteins can be used to destroy harmful cancer cells. These can generate radiation which can kill the bacteria, viruses and other cancerous cells, mimic the natural biological process like repair of damaged tissue, healing of broken bones, transport of oxygen to the body to produce more red blood cells, cure skin diseases, mouthwash full of smart nanomachines can be used to clean the mouth and can remove atherosclerotic plaques preventing heart attacks.