

Nanorobotics in Cancer Therapy

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Abstract: *Nanorobotics is the technology of creating machines or robots at or close to the scale of a nanometre (10⁻⁹ metres), machines Constructed at the molecular level (nanomachines) may be used to cure the human body of its various ills. Traditionally nanotechnology dealt with design, synthesis and Application of materials along with devices at the nanometer scale. The application of nanotechnology in the field of health care and drug Delivery has come under great attention in recent times. Nanomaterials have a large surface area to Volume ratio and their physicochemical properties, such as Friction and interaction with other molecules, are distinct From equivalent materials at a larger scale. The most com-Mon use of nanotechnology in medicine has been in the Areas of developing novel therapeutic and imaging modal-Ities that have the potential to outperform the current state of The art in these areas. We will focus on the application of Nanotechnology to the development of smart drug deliv-Ery vehicles for cancer therapeutic applications. The most Common examples of these nanoscale delivery vehicles include polymeric nan Particles, dendrimers, nanoshells, liposomes, nucleic acid-Based nanoparticles, magnetic nanoparticles, and virus Nanoparticles. The following four types of nanorobotic systems have been developed and studied so far (a) large size nanomanipulators with nanoscale manipulation capability; (b) proicin- and DNA-hused bionanorobotic systems;c) Magnetically guided nano robotic system and d) bacterial based Nanorobotic etc. It can be used in many other applications.*

Keywords: Nanorobotics.

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