NANOBOTS IN MEDICINE

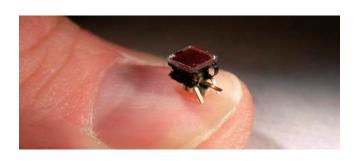
M.S. SIVAPRIYA, CAROLINE EL FIORENZA J ASSISTANT PROFESSOR, DEPARTMENT OF CSE, SRMIST, RAMAPURAM



Mission of NANOBOTS in Medicine

The emerging technology of nanobots started its game in medicine. Nano medicine is a yield of nano technology, where the domain of medicine accquires the knowledge of nano technology.

Nanobots now started to walk in the world of medicine against most chronic diseases like cancer. Nanobots acts as mini surgeon and can even change the structure of DNA. Research regarding nanobots in medicine offer several opportunities such as artificial antibodies, artificial white blood cells (WBCs) & red blood cells (RBCs), and antiviral nanobots. Recent advances in nanotechnology have enabled doctors to use nanoscale materials, including biocompatible nanoparticles and nanobots, to sense the actuation purposes in a living organism.



APPLICATIONS

FIELD OF HEMATOLOGY

CANCER DETECTION AND THERAPY

BIOHAZARD DEFENSE

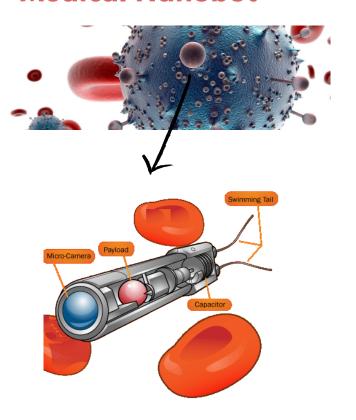
NANOROBOTICS IN SURGERY

DIAGNOSIS AND TESTING

NANOROBOTICS IN GENE THERAPY

NANODENTISTRY

Medical Nanobot



The robot in this illustration swims through arteries & veins using a pair of tail appendages.

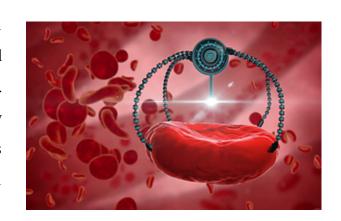
If we measure the Nano in linear scale it is one billionth of meter in length which can be said of 10 atoms in size. The nanobot is a pre programmed device and capable of working in atomic level.

When we talk about nanobots today the reference self-propelled mostly nanomotors and other biodegradable nano devices made of bio-nano components, which carry cargo to the target sites, i.e. deliver drugs diseased cells. For instance. these to nanorobots can be programmed to transport molecular payloads and cause on-site tumor blood supply blockages, which can lead to tissue death and shrink the tumor.

The basic software that is used in existing nanobots is C++ and extended upto advanced programming languages.

"Can I think and take my own decision?"

The future work is to forecast a nanobot with artificial intelligence. The big companies now started the project to manufacture AI embedded nanobots. Now the super humans are going to be ready shortly with this mini doctors. Yes!!! Be ready to face this super humans. If this nanobots implanted to human body it will give the raise of super humans.



"We see the creation of technology that can meld the biological with the technological, and so be able to enhance human cognitive capability directly"

John McNamara, from IBM Hursley Innovation Centre