



Nanobiotechnology: An Emerging Technology in the Human Health Care

Sarita Agrahari *

Department of Biotechnology, I.T.S. Paramedical College, Muradnagar, Ghaziabad, Uttar Pradesh, India

Address for Correspondence: Sarita Agrahari; hisarita@gmail.com

ABSTRACT: Nanotechnology is an emerging technology in which we can do design and production of devices with special and improved properties which is at nanoscale. Nanoscale is the length scale of approximately 1–100 nm range at which the particles are small enough to confine their electrons and produce quantum effects that results in novel properties. Nanobiotechnology has influenced various aspects of science and technology. Nanomaterials are designed either by breaking down larger particles to nanoscale or built up from the elemental constituents which are respectively known as the top down and the bottom up approaches. It has promising technologies involved in medicine that play an important role in improving the present scenario of human health care. It is being widely researched on and many breakthrough technologies have come up in the market. Nanomedicine, holds the promise of bringing about future developments in the field of medicine. It allows us to understand the functioning of the human body better and fight against a number of serious diseases like cancer and cardiovascular diseases etc. Nanomedicine mainly has applications in the diagnosis of a disease and designing efficient, safe and target specific drug delivery systems that helps in the treatment of the disease. Nanoparticles help in site-specific targeting that increases the efficacy of the drug being administered and reduces the side effects. The different nanoparticles that can be used for drug delivery are such as liposomes, inorganic nanoparticles, dendrimers, biological nanoparticles and polymeric nanoparticles. The most promising application nanobiotechnology is in human health. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.

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