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Rise of Dead: Review on Nanotechnology

Gopichand KV*

Department of nanotechnology, Vignan university, vadlamudi, Guntur

Review Article

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***For Correspondence**

Department of nanotechnology, Vignan university, vadlamudi, Guntur.

E-mail: gopichandk5@gmail.com

ABSTRACT

Nanotech is the abbreviation for nanotechnology. The main study involved in it is based on the scale of atoms and molecules. Nanotechnology mainly deals with smaller one nanometre (nm) is equal to 10^{-9}m. The main two ways involved in nanotechnology are In the approach of bottom-up and In the top-down approach.

Keywords: Nanoscale, Cryonics, cryoprotectants, cryopreservation, immortality

INTRODUCTION

Nanotechnology is manipulated nanoscale. The nanometer may be a measure of small length of 1 billionth meter consisting of 3 or four atoms in a very row. Hence, engineering science consists of materials of building and coming up with devices. So the technology implies devices and materials wherever atom is allotted with the device functions. Reckoning on machines of molecules, machines perform the operate of the look. These molecular machines will create machines for alternative product and molecules wherever structure of atom is organized exactly to form the actual product.

These machines can assemble atoms into complex structures known as assemblers which can make or design anything compatible with physics laws.

Richard Feynman first raised a concept about nanotechnology in the year of 1959. In 1981 scanning tunneling microscope was invented with the help of it in 1989 scientists successfully identified individual atoms. The revolutionized research in nanotechnology is cryonics which made the raising of dead nanotechnology.

Cryonics

Cryonics is nothing but preserving a body at very low temperatures most probably at a temperature of -196°C. Basically the main process involved is resuscitation and restoration but at present the process is irreversible, might be possible in future [1-13].

At present cryopreservation of humans are conducting on legally dead persons then itself the process will be begin. Initially there will be cardiac arrest and then cryoprotectants are added to prevent formation of ice at the time of cryopreservation. Dr. James Bedford was the 1st human who has cryopreserved in the year of 1967[14-20].

Kryo (Cold) Theory

By freezing the brain we can store memory as many years we want to; this memory is stored within the structure and molecules of the brain [21-28]. It uses a temperature of below -130°C which is nothing but cryopreservation. At present with this technology brains are damaging and not reversible.

It requires a far future technology to preserve the brain from damaging. With the help of nanomedicine we reduce the damage from molecular level and we can make the process reversible [29-36].

Some of the consequences it is currently facing are:

Preservation injury

In this process body is storing by freezing. At the time of freezing cryoprotectants are added to prevent cell from freezing to ice [37-42]. During this process extracellular water is getting freeze whereas water inside the cell remains the same. As a result we can save cells from bursting but due to dehydration the calls are shrinking and osmotic imbalance is taking place. Due to ice formation there is a disconnection of cells and the major organs which needs to be functional.

Vitrification [43-51] is nothing but cooling and solidification without formation of crystal. Initially animals were undergone and observed no damage due to crystals [52-74]. But instead of that they found cell damage due to shrinkage because of dehydration. The problem is more worsen with the large tissues.

Kryo History

The concept of cryonics raised by Robert Ettinger in the year of 1962 by his book named as the prospect of immortality which says that freezing of humans takes the medical technology to future and early stages he also stated clinical death may be reversible [75-92]. By combining his two statements concept of cryonics has rised.

Some of the famous people who were cryopreserved are:

James Bedford: He was a psychology professor in university of California. He died on 12 January,1967 and then cryopreserved. The anniversary of his cryopreservation is celebrated as BEDFORD DAY [92-103].

Dick Clair: He was a USA TV actor and writer. He donated $20,000 to cryonics organization. He was cryopreserved in the year of 12 December, 1988.

L. Stephen Coles: He was an executive director and cofounder of Gerontology Research Group. He was cryopreserved in 03 December, 2014.

Thomas K. Donaldson: He was a famous mathematician and a cryonics lawyer. He was cryopreserved in the year of 2006.

Jerry Donnell Leaf: He was Vice President and Director of the cryonics organization. He was died of heart attack and cryopreserved in 10 july, 1991.

Theodore Samuel: He was USA famous baseball player and he was cryopreserved in July 5, 2002.

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