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“Robotics in medicine” cryonics in nanotechnology raising from death

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ABSTRACT

Cryonics-raising the dead:

The concept goes like this: When a patient's heart stops beating, but before the structure of his brain starts to degenerate, the patient is attached to a heart –lung machine and progressively infused with ‘antifreeze’ and other cellular stabilizers and then his body temperature is lowered until the patient is at ‘liquid nitrogen temperatures’. At this point, all molecular change stops indefinitely and the patient are put in storage.

When the nanotechnology cell repair devices become available, the fatal disease that caused ‘death is reversed, the anti-freeze toxicity is removed, and the patient is warmed back up alive and well.

In cryonics- freezing people fore future – scientists take patients who have been labeled as ‘dead’ by current medical criteria, replace their blood and much of their body water with chemicals to inhibit freezing damage, and preserve them in liquid nitrogen at (-196 Celsius). At that temperature all molecules in the body are locked in solids can no longer move around to react. Thus the individual can remain unchanged for thousands of years. It is possible that frozen patients will repairable and relabeled as ‘potentially alive’ by using nannies

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Introduction

“The nation can use its core competence in I.T., natural resources and human resources to become a knowledge super power by 2020 ”

If these are the worthy words of Dr.A.P.J.Abdul kalam, then there is a vast development made in technical side where each and every engineer play a unique role in it. The affords and efforts made by us is that, all the elements can change its own nature colour only when there is a great change in its size.

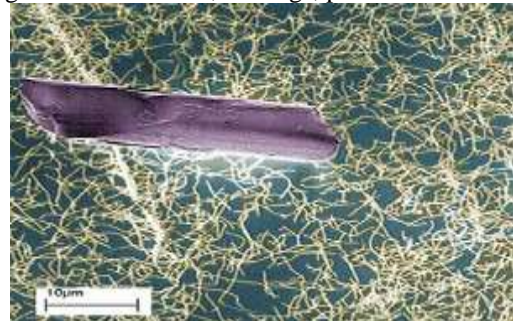
A finch lives two years, a parrot ninety years, a gecko one year and a Galapagos island turtle two hundred years. Why this difference? The genetic programming. Life is molecular machinery with atoms arranged in dynamic complex relationships, controlled by DNA. Using nanotechnology we build molecular assembler and change the genetic programming so that a person can live longer. If the person is dead we preserve him using cryonics and incorporate molecular assembler and nanorobots in his body, so that heart starts functioning again and the person can be relabeled as potentially alive.

Nanotechnology

Nanotechnology is the engineering of tiny machines — the projected ability to build things *from the bottom up* inside personal nanofactories (PNs), using techniques and tools being developed today to make complete, highly advanced products. Ultimately, nanotechnology will enable control of matter at the nanometer scale, using mechanochemistry. Shortly after this envisioned molecular machinery is created, it will result in a manufacturing revolution, probably causing severe disruption. It also has serious economic, social, environmental, and military implications.

Nanomaterials

The nano phase material is identified as one of the major field in modern materials science as a result of work of Gleiter and coworkers in 1990. As the grain size decreases, there is a significant increase in the volume fraction of grain boundaries or interfaces. This characteristic strongly influences the physical, chemical and mechanical properties of the material. Using a variety of synthesis methods, it is possible to produce nano structured materials in the following forms: thin films, coatings, powders



Design Consideration of Nanorobot

There are four considerations when we design our nanorobot.

- Size
- Memory
- Power
- Communication

The size of the nanomachine is an important consideration, determines the minimum size of the blood vessel that it can navigate. We must select the size of the nanorobots, so that it will not damage the blood vessel and also it must not block the blood vessel, blocking the blood vessel may cause a blood clot or even stops the flow of blood. But when the nanorobots get

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smaller we face another problem of manufacturing it. Also we must use more machines to complete the task of curing. This leads to communication and controlling problems. So the size of the nanorobots must be a balanced one.

Memory

One of the most important potential applications of nanotechnology will be the development of new information devices working on quantum mechanical principles.

The poster considers fundamental quantum mechanical restrictions on the parameter of computer hard molecular nano-memory. Quantum mechanics fundamental restrict the parameters of computer hard memory. Tunneling through potential barrier imposes a lower limit on the maximum recording for energy imposes fundamental upper and lower limits on the maximum recording and reading and reading speed. The information exchange rate cannot be than 20 bits/sec for molecular QMEM.

Power

The powering of the nanorobots can be done by metabolizing local glucose and oxygen for energy. In a clinical environment, another option would be externally supplied acoustic energy. Other sources of energy within the body can also be used to supply the necessary energy for the devices. The onboard nuclear power source would advantages as well. For one thing the same radioactive material could be used for power and tracking, since the casing must be hotter than body temperature to produce power. This would have the effect of greatly reducing the complexity of the micro robot.

Communication:

For a nanorobot communication to the outside controller is essential in finding its way to the infected area of the body. These machines are injected in the femoral artery in our leg. So it must navigate through the blood vessel to reach its destination. The nanorobots must communicate to the external controller. The external controller may instruct the nanorobots in their path or actions. Communication with the device can be achieved by broadcast-type acoustic signaling navigational network may be installed in the body, with station keeping navigational elements providing high positional accuracy to all passing nano robots that interrogate them, wanting to know their location . This will enable the physician to keep track of the various devices in the body.

Cryonics:

In cryonics – freezing people for future – scientists take patients who have been labeled as ‘dead’ by current medical criteria, replace their blood and much of their body water with chemicals to inhibit freezing damage and preserve them in liquid nitrogen at (-196 Celsius) . At that temperature all molecules in the body are locked in for thousands of years. It is possible that frozen patients will be repairable and relabeled as ‘potentially’ by using nanites. Cryonics is a technique designed with the intent to save lives and overcome illness and suffering.

Cryonics performed on living people:

Legally, not yet. Obviously, it would be better to cool a patient before illness causes so much physical damage that it results in death. But it's not presently allowed by law, even for someone in great suffering or with a terminal illness/

We hope that one day it will be, under carefully controlled conditions once revival from cryonic suspension can be done.

Advantages:

It is possible that the frozen people will be repairable and relabeled as potentially alive.

Life extension.

Super medicine for fatal disease.

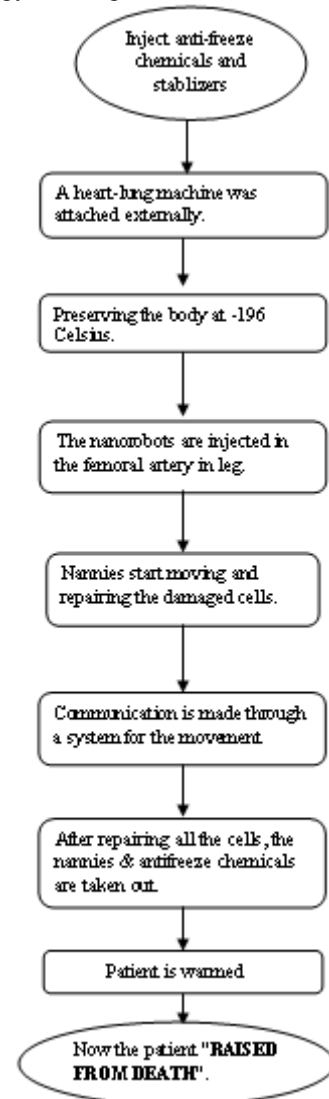
Disadvantages:

* Population will be uncontrolled

* Cryonics can't restore the life to the people whose brain has been physically destroyed.

* Practical implementation is quite difficult & expensive.

Is nanotechnology bad or good?



Nanotechnology offers great potential for benefit to humankind, and also brings severe dangers. While it is appropriate to examine carefully the risks and possible toxicity of nanoparticles and other products of nanoscale technology, the greatest hazards are posed by malicious or unwise use of molecular manufacturing. CRN's focus is on designing and promoting mechanisms for safe development and effective administration

Conclusion:

As 'TAGORE' said "THE FOUNTAIN OF DEATH MAKES THE STILL WATERS OF LIFE PLAY".

Let "DEATH OF DEATH" become possible and "life after death continue".