BVP's INSPIRED ROOTS

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Gene Therapy

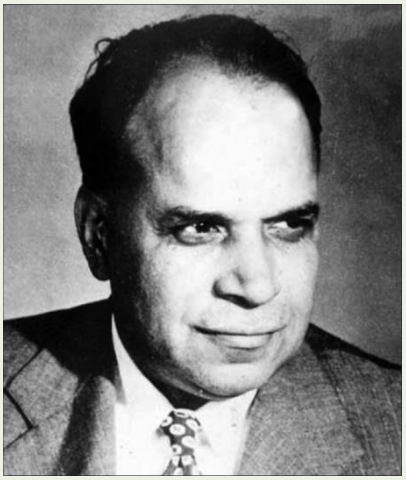
Gene therapy refers to a type of experimental treatment in which foreign genetic material (DNA or RNA) is inserted into a person's cell to prevent or fight disease. There are two types of gene therapy: - Germ line therapy and Somatic gene therapy.

Some of the major advantages of gene therapy include the ability to replace defective cells, help eradicate diseases and its great therapeutic potential. The negatives associated with it are that it may damage the gene pool, modify human capabilities aiding certain countries in creating undefeatable armies and give rise to other disorders.

Amongst recent news, researchers with the artificial intelligence company Insilco Medicine Inc. who teamed up with international scientists say discoveries in gene therapy and drug creation could be beneficial to future astronauts on deep space missions.

They plan to help astronauts survive high level of radiations in space and even get them to Mars without the deadly exposure expected during three years of space travel.

More to Know:



Yellapragada Subbarao was an Indian biochemist who discovered the function of Adenosine tri-Phosphate or ATP as an energy source in the cell, developed methotrexate for the treatment of cancer and discovered a broad spectrum antibiotic.

The theory of Everything:

A Tribute to Stephen Hawking

- Stephen William hawking was an English theoretical physicist, cosmologist, astronomer and author and is widely regarded as one of the most brilliant theoratical physicist in history. Born on 8th January 1942, Hawking attended university to college, Oxford, where he studied physics, Hawking went on to Cambridge to research cosmology, the study of the universe as a whole.

- At the age of 21, he was diagnosed with the motor neuron disease, more commonly known as Lon Gehrig's disease or amyotrophic lateral selerosis (ALS) which gradually paralysed him over the decades but he did not let it deter him front his endeavours.

- Hawking radiation is a black body radiation which is emitted by black holes, due to quantum effects near the event horizon. Hawking radiation reduces the mass and the energy of the black hole and is therefore also known as black hole evaporation. Because of this, Black holes that lose more mass than they gain through other means are expected to shrink and ultimately vanish.

- Stephen Hawking's life exemplified the undying spirit his life is an inspiration an motivation for humanity- for able, differently able, young and old like.

"Intelligence is the ability to adapt to change"

Hyperloop- The Future of Transportation

If you thought of concept of people travelling between cities- or even across the nation- in a matter of minutes was just a bit of Jetsons science fiction fantasy, wait until you hear about the mysterious hyperloop from Elon Musk- a man that is some now considered to be the world's greatest living entrepreneur. At the recent All things D Conference, Elon Musk spoke cryptically about a revolutionary new form of transportation that's one part of concord, one part railgun and one part air hockey table. And according to Musk, it could forever change the way we think about transportation.

One thing is certain- our nation's transportation infrastructure is badly flawed now, whether it's planes, trains or automobiles. Here's hoping that Elon Musk's Hyperloop can lead us into a brave new age of transportation that's cheap, fast, weatherproof, crashproof and always on time. If anyone can do it, it's Elon Musk

More to Know:-

Elon Reeve Musk is a business magnate, industrial designer, and engineer.[3] He is the founder, CEO, CTO, and chief designer of SpaceX; early investor, CEO, and product architect of Tesla, Inc.; founder of The Boring Company; co-founder of Neuralink; and co-founder an initial co chairman of Open AI.

Serendipity: The Role of Chance in Making Scientific Discoveries

Serendipity is a happy and unexpected event that apparently occurs due to chance and often appears when we are searching for someone else. Serendipity is a delight when it happens in our daily life and has been responsible for many innovations and important advances in science and technology.

Microwaveoven	Percy Spencer, an engineer at Raytheon after his WWI stint in the navy, was known as an electronics genius. In 1945, Spencer was fiddling with a microwave-emitting magnetron- used in the guts of radar arrays-when he felt a strange sensation in his pants. Spencer paused and found that a chocolate bar in his pocket had started to melt. Figuring that the microwave radiation of the magnetron was to blame(or to credit, as it would turn out), spencer immediately set out to realize the culinary potential at work. The end result was the microwave oven.
Super Glue	In 1942, Dr. Harry Coover of Eastman-Kodak Laboratories found that a substance he created- Cyanoacrylate-was a miserable failure. It was not, to his dismay, at all suited for a new precision gun sight as he hoped-it infuriately stuck to everything it touched and was forgotten. Six years later, while overseeing an experimental new design for airplane canopies, cover found himself stuck in the same gooey mess with a familiar foe-cyanoacrylate was proving useless as ever. But this time, cover observed that the stuff formed an incredibly strong bond without needing heat. Coover slapped a patent on his discovery, and in 1958, a full 16 years after he first got stuck, cyanoacrylate was being sold on shelves
Teflon	Teflon was created by chemist Roy Plunkett in 1938 had hoped to create a new variety of CFC's. When he inspected a canister that was supposed to be full of gas, he found that it appeared to have vanished-leaving behind only a few white flakes Plunkett was intrigued by these mysterious chemical bits and began at once to experiment with their properties. The new substance proved to be a fantastic lubricant with an extremely high melting point-perfect at first for military gear, and now the stuff found finely applied across your non-stick cookware.

Pacemaker	Wilson Greatbatch, an assistant professor at the university of Buffalo took a 1 mega ohm resistor instead of a box to use on a heart-recording prototype. The resulting circuit produced a signal that sounded for 1.8 milliseconds and then paused for a second- a dead ringer for the human heart. Greatbatch realized the precise current could regulate a pulse, overriding the imperfect heartbeat of the ill.