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Journal of Genetic Syndromes & Gene Therapy

Commentary

Study of Gene Therapy

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DESCRIPTION

Gene therapy is a branch of medicine that focuses on applying genetic structure of cells to create a therapeutic effect. It is based on the idea of treating a genetic disease at its source. If, for example, a mutation in a specific gene causes the creation of a damaged protein in a (normally recessively) inherited disease. It could be required to supply a functional protein by providing a copy of this gene that is free of the harmful mutation. This treatment method is known as gene drug therapy, and it is used to treat inherited retinal problems. It is the process where the instructions are given in such a way that the DNA is converted into a functional product called as a protein. Mutation is the alteration of the genetic material in the cell of a virus. For some types of epilepsy, gene therapy is being researched. It uses viral or non-viral vectors to transfer DNA or RNA to target brain locations where seizures arise in order to prevent epilepsy or decrease seizure frequency and severity. Ethical claims about germ line engineering include beliefs that every fetus has a right to remain genetically unmodified, that parents hold the right to genetically modify their offspring. It is add to diet, exercise, education, training, cosmetics, and plastic surgery. Gene doping is generally done in athletes to increase the performance of the individual. This is the gene therapy where the gene is modified in such a way that the gene information is recreated in such a way that the DNA matter is programed or given instructions using the gene therapy technology.

These are the advance evolvements of the branch of biotechnology. Gene therapy is used in color blindness, epilepsy, osteoarthritis, Parkinson's disease. There are two types of Gene therapy of cells are depending on, Transfer of a segment of DNA to any cell in the body that does not contain sperm or eggs is defined as somatic gene therapy. Transfer of a piece of DNA to cells that produce eggs or sperm is known as germline gene therapy. Gene therapy medications are treated with Leukemia, blindness, and biological problems. They work by replacing bad genes with new ones in the body. Gene remedies are extraordinarily expensive to design and produce, and clinical studies and bringing goods to market add to the price. However, the paradigm applied in the price-setting process may be the basic reason gene therapy is so expensive. Gene therapy is involved bye the manufacturing of the disease in the therapeutic effect.

For treating some genetic conditions, gene therapy approaches to replace a damaged gene with a healthy gene have been proposed and are being developed. Diseases caused by autosomal recessive disorders, such as sickle cell disease, in which a person's normal appearance or cell function can be restored in cancer cell by a normal copy of the genetic defect. There is no research on the risk and benefits of gene therapy for sickle cell disease. In gene therapy there are two vectors are namely Virus and Non-Viral methods.

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Received: July 7, 2021; **Accepted:** July 22, 2021; **Published:** July 29, 2021

Citation: Cliiment M (2021) Study of Gene Therapy. J Genet Syndr Gene Ther. 12:344