gene therapy

Skilled Labor Shortages Impact Cell And Gene Therapy

Moreover, gene therapies are extremely costly, hampering patient access and causing reimbursement difficulties with healthcare providers. This is a serious problem because the cost of gene therapies is often not covered by insurance, and patients must pay out-of-pocket for the treatment

Rare Diseases: Making Treatments Less Rare with Gene Therapy

Novartis Gene Therapies Grants. Novartis Gene Therapies wants to ensure that physicians, researchers, and other healthcare professionals have access to complete, high-quality gene therapy information. To this end, the company has created the Novartis Gene Therapies Grant Program, which provides funding for selected research projects.

Gene therapy: advances, challenges and perspectives

Gene therapy is a technique that modifies a person's genes to treat or cure disease. Gene therapy involves the delivery of a corrective copy of a gene or the use of engineered virus particles to correct or replace a disease-causing gene.

How does Gene Therapy work?

Gene therapy works by introducing a normal copy of a gene into a patient's cells instead of using drugs or other traditional treatments. This allows the body to produce a specific protein or hormone that is missing or defective in the patient's cells.

There are two main types of gene therapy: ex vivo gene therapy and in vivo gene therapy.

Ex vivo gene therapy involves removing the patient's cells from the body, modifying them in the laboratory, and then reintroducing them back into the patient. In vivo gene therapy involves delivering the gene directly into the patient's cells in the body during the treatment process.

In both cases, the goal is to deliver healthy copies of the gene to the affected cells to allow them to produce the necessary protein or hormone that is missing.

Gene therapy is used to treat a variety of conditions, including inherited disorders, genetic diseases, and some types of cancer. Some examples of gene therapy currently in use include:

- Sickle cell disease
- Hemophilia
- Retinal dystrophies
- Lysosomal storage diseases

There are several benefits to gene therapy, including:

- It can provide a permanent cure for certain conditions
- It is less invasive than traditional treatments
- It can target specific cells or tissues

However, gene therapy also has some risks and potential side effects, such as:

- Allergic reactions
- Immune system reactions
- Insertional mutagenesis
- Insertional silencing

Despite these risks, gene therapy continues to be an active area of research and development, with many ongoing clinical trials and promising new treatments on the horizon.

It is important to note that gene therapy is still in its early stages and is not yet a widely available treatment option. More research and development are needed to improve the safety and efficacy of gene therapy and to overcome the challenges associated with this approach.