GLOBAL REGENERATIVE MEDICINE MARKET



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- Regenerative medicine is an exciting and rapidly advancing field that has the potential to transform the way we treat a range of chronic diseases and conditions. Cell therapy and gene therapy are two important approaches within this field that have shown promise in preclinical and clinical studies.
- The global regenerative medicine market size was valued at USD 22.24 billion in 2022.
- Cell therapy involves the use of cells to repair or replace damaged or dysfunctional tissues and organs. Different types of cells can be used, including stem cells, which can differentiate into different cell types, and autologous cells, which are harvested from a patient's own body. Xenogeneic cells, which come from different species, can also be used in some cases. Cell therapy can be used to treat a wide range of conditions, including cardiovascular disease, diabetes, and neurodegenerative disorders.
- Gene therapy involves the delivery of nucleic acid polymers or genes into a patient's cells to correct or prevent genetic disorders or other diseases. This can be done using a variety of techniques, such as viral vectors, liposomes, or electroporation. Gene therapy can be used to treat a range of conditions, including inherited genetic disorders, cancer, and infectious diseases.
- Both cell therapy and gene therapy have shown promising results in preclinical and clinical studies, but there are still many challenges to be addressed before they can be widely used in clinical practice. These include issues related to safety, efficacy, and scalability, as well as regulatory and ethical considerations. Nonetheless, the potential of regenerative medicine to revolutionize healthcare is undeniable, and ongoing research and development in this field hold great promise for the future.



KYM GLOBAI INSIGHTS

REGENERATIVE MEDICINE REGIONAL ANALYSIS

1

The market size for regenerative medicine in North America was estimated at USD 5,990.8 million in 2020 and is expected to increase at a CAGR of 22.2% from 2022 to 2030.



From 2022 to 2030, the Asia Pacific market is expected to increase at a CAGR of 26.6%, reaching a value of USD 1,549 million in 2020.

Geographically, North America dominates the regenerative medicine market due to a high prevalence of chronic diseases and an advanced healthcare system. On the other hand, the Asia-Pacific region is predicted to have strong expansion due to rising healthcare costs and expanding investments by significant manufacturers in the development of new goods. Given that the majority of the medicines are still in the third phase of clinical trials, the North American regenerative medicine market is currently expanding and is anticipated to show significant promise in the next years. This demonstrates how businesses have gotten involved in the commercialization of items for regenerative medicine



Japan has the greatest impact on the pharmaceutical and biotechnology industries among the Asia-Pacific nations, whereas China has the fastest-growing GDP. Additionally, due to an increase in geriatric patients, Australia's healthcare costs are higher than those in other Asia-Pacific nations. The rest of the area offers the market's players significant potential opportunities.

Market Share by Region



REGENERATIVE MEDICINE MARKET SHARE BY PRODUCT

In 2022, In the global market for regenerative medicine, the tissue-engineering segment held the largest market share. The ability to replace a damaged structure with a living structure and the potential for creating cures for previously incurable medical illnesses are two of the many benefits of tissue engineering that account for its considerable market share. The demand for products in the tissue engineering segment is also anticipated to increase due to increasing expenditure in research & development for the creation of effective therapies and the continuous release of new and effective products.

The segment for stem cell therapies is anticipated to expand at the greatest CAGR over the course of the forecast period, primarily as a result of key manufacturers' substantial investments and the rising popularity of stem cell-related treatment alternatives. Other reasons contributing to the rapid development of the stem cell therapy market include the world's aging population and an increase in the number of trauma cases.

The market for cell treatment was valued at USD 7,051.7 million in 2020 and is expected to grow at a CAGR of 22.2% between 2022 and 2030.

The market size for gene therapy was evaluated at USD 993.4 million in 2020 and is projected to increase at a CAGR of 23.1% from 2022 to 2030.



REGENERATIVE MEDICINE LEADING PLAYERS



KYM GLOBAL INSIGHTS

MARKET OPPORTUNITIES

LUCRATIVE OPPORTUNITIES FOR NOVEL STEM CELL TECHNOLOGIES

The development of stem cell technology has given the tissue engineering and regenerative medicine markets a new foundation. Untapped applications of stem cell technology, like those for umbilical cord blood, stem cells, however, present attractive business potential for the tissue engineering and regeneration sector. Highly proliferative and differentiated cell types are necessary for tissue engineering and organ regeneration. Highly deterministic stem cells, allogenic and autologous stem cells are the two origins of cord blood stem cells. The patient's body parts are used to create the cells. These cells' favorable propensity for immunological responses is a benefit. Following implantation, these cells do not trigger the body's immune response. Adult stem cells (ASC) are the second class of stem cells. These cells are incredibly flexible and can be changed into any kind of cell. These stem cells have stronger replacement capabilities than regular cells because they are produced from bone marrow tissues. Embryonic stem cells (ESC), the third type of cell, are incredibly promising for the industry. However, these cells are subject to ethical concerns because they were taken from a baby or fetus. As a result, the utilization of these stem cells for commerce and research is limited. However, future ethical problems are anticipated to be solved by increased awareness of stem cell therapies and tissue engineering. Additionally, xenogenic cells are stem cells that have been obtained from outside sources, such as cells from different species. Although these cells have enormous potential in the field of regenerative medicine.

INCREASE IN POTENTIAL IN EMERGING ECONOMIES

2

The market for regenerative medicine has potential in developing nations since catastrophic injuries and organ transplants are becoming more commonplace globally. The major players have carefully considered the possibilities of tissue engineering and regenerative medicine in emerging markets and have adopted a variety of growth tactics, including product launches, approvals, agreements, partnerships, and mergers. The emerging nations are anticipated to adopt tissue engineering and regeneration technology, notwithstanding the ethical issues the market faces as a result of unfavorable norms.

MARKET OPPORTUNITIES(CONT'D)

GROWTH IN NEED OF REGENERATIVE MEDICINE IN ORGAN TRANSPLANTATION



According to the Health Resources & Services Administration (HRSA) of the U.S. Department of Health, as of March 2022, there were over 106,005 patients in need of organ transplants, and it is anticipated that 17 people would die every day without them. The most popular treatment is a kidney transplant, with patients needing kidneys making up 80% of the waiting list. Despite the government's aggressive efforts to raise the number of donors, there is a rising need for organ transplants.

The growing need for organ transplants around the world can potentially be met by tissue engineering and regenerative medicine. Major obstacles, such as vascularization and tissue signaling, to duplicate the functioning of the original organs, however, are still in the development stage. To meet the need for organ transplants, there is a better chance of successfully creating complex tissues and entire organs. For instance, tissue engineering regeneration and bioprinting technologies have been used to create human liver prototypes. Due to the high number of products in the pipeline that are now undergoing various stages of clinical trials and are anticipated to be commercialized in the future, there is a significant market opportunity for regenerative medicine products.

MARKET FORECAST

The global regenerative medicine market size was valued at USD 22.24 billion in 2022 growing at the rate of 20% from 2022-2032.



Market Value, USD billion