

# **Regenerative Medicine Market Assessment, By Component [Therapeutics, Tools, Banks, Services], By Product [Gene Therapy, Cell Therapy, Tissue Engineering, Organ Therapy, Small Molecules and Biologics], By Material [Synthetic Material, Biologically Derived Material, Genetically Engineered Material, Others], By Application [Wound Care, Musculoskeletal, Ophthalmology, Oncology, Cardiovascular, Dermatology, Neurology, Others], By End-user [Hospitals, Clinics, Others], By Region, Opportunities and Forecast, 2017-2031F**

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## **Abstracts**

Global regenerative medicine market size was valued at USD 24.91 billion in 2023, expected to reach USD 99.95 billion in 2031, with a CAGR of 18.97% for the forecast period between 2024 and 2031. The global regenerative medicine market is driven by factors such as a growing aging population, increasing prevalence of chronic diseases, technological advancements, growing investments, increasing patient demand, and favorable reimbursement policies.

The global regenerative medicine market is undergoing rapid expansion. With an increasing elderly demographic, the prevalence of age-related health issues, chronic diseases, and cases related to tissue degeneration have increased significantly. Conditions such as diabetes, cardiovascular diseases, and neurodegenerative disorders are increasing globally, fuelling the demand for global regenerative medicine market interventions that can repair or replace damaged tissues. Regulatory agencies have

recognized regenerative medicine's potential and created pathways and guidelines for product approval and commercialization. Collaborative efforts across various sectors, including pharmaceutical companies, biotechnology firms, academic institutions, and research organizations, have facilitated the development of innovative regenerative medicine products. These partnerships accelerate research and development, resulting in more accessible patient treatments.

Technological advancements in the global regenerative medicine market, such as stem cell research and gene therapy, have expanded the possibilities in regenerative medicine, making treatments more effective and versatile. With patients becoming more aware of regenerative medicine's potential, there is an increasing demand for these innovative therapies. Favorable reimbursement policies and government support in some regions have further encouraged accessibility. Ethical concerns, particularly regarding stem cell research, have hindered the development of alternative methods like induced pluripotent stem cells (iPSCs). The trend toward personalized medicine has reinforced the importance of customizing regenerative medicine treatments based on individual genetic makeup, further enhancing the growth and potential of global regenerative medicine market. These factors collectively propel the regenerative medicine market into a promising and dynamic sector within the healthcare industry, though challenges such as regulatory hurdles and development costs still need to be addressed for sustainable growth.

### Increasing Prevalence of Chronic Diseases

The increasing prevalence of chronic diseases is a significant catalyst for the global regenerative medicine market. Chronic diseases, as highlighted by the World Health Organization (WHO), including cardiovascular diseases, cancer, diabetes, and respiratory illnesses, have been increasing at an alarming rate. WHO's projections indicate that if the trend persists, by the year 2050, chronic diseases will contribute to a staggering 86% of the estimated 90 million annual deaths. The increase in chronic diseases is a cause for concern due to the associated healthcare burden and the limitations of conventional treatments. Regenerative medicine offers a promising avenue to address these health challenges by focusing on repairing or replacing damaged tissues, effectively targeting the root causes of these chronic conditions. As a result, the escalating burden of chronic diseases is a strong driver for the growth of the regenerative medicine market, as it seeks to provide innovative and more effective solutions.

### Growing Investments in Research and Development

Investments in research and development in gene therapy solutions have played a pivotal role in propelling the global regenerative medicine market. Gene therapy can potentially correct genetic defects, manipulate cellular functions, and address various diseases at their source. The targeted approach has generated substantial financial support with its ability to regenerate or repair damaged tissues. Investments are driving innovation and accelerating the development of novel regenerative medicine treatments, ultimately contributing to the growth and expansion of the global regenerative medicine market, offering hope for previously untreatable conditions, and enhancing the overall healthcare landscape.

In September 2023, TherageniX, a startup from the University of Nottingham, which specializes in a dry powder gene therapy formulation to enhance bone graft augmentation, received a grant of approx. GBP 995 thousand from Innovate UK, the innovation agency of the United Kingdom, in collaboration with the University of Nottingham. The financial support is earmarked for advancing the company's work on a powder-form non-viral gene delivery system, aimed at enhancing tissue regeneration post-surgery.

### Government Initiatives

Governments around the globe are increasingly acknowledging the substantial potential in the regenerative medicine domain and are actively implementing measures to promote its usage and expansion. The government is taking these measures through financing research and development, establishing regulatory structures for the safe and efficient deployment of treatments, and bolstering the infrastructure required for the production and distribution of regenerative medical solutions. Investment in regenerative medicine catalyzes innovation and positions nations to become leaders in the rapidly growing sector. By nurturing an environment conducive to scientific exploration and commercial advancement, governments aspire to enhance healthcare outcomes, address unmet medical needs, and contribute to advancing the global regenerative medicine market.

In June 2023, the Indian central government inaugurated India's inaugural center dedicated to regenerative therapies for repairing damaged corneas in Delhi. The facility enables patients to receive bioengineered cornea treatment, harnessing tissue-specific exosomes and biomaterials mimicking natural tissues to stimulate the regeneration of robust and functional corneas. The treatment involves applying liquid drops directly onto the cornea, which solidifies in under 10 minutes, seamlessly integrating with the

patient's existing corneal tissue.

### Increasing Demand for Gene Therapy

There has been a notable surge in demand for gene therapy in the global regenerative medicine market. Gene therapy is gaining momentum due to its capacity to tackle various genetic disorders, chronic ailments, and unaddressed medical requirements. As gene therapy research and technologies continue to progress, there is assurance over its efficacy and safety. As a result, demand is increasing, and gene therapy is being positioned as a potential path in the field of regenerative medicine as patients and healthcare professionals are increasingly looking for gene therapy alternatives.

In June 2023, Sarepta Therapeutics, Inc., a frontrunner in precise genetic medicine for rare diseases, unveiled that the U.S. Food and Drug Administration (FDA) approved ELEVIDYS (delandistrogene moxeparvovec-rokl). A gene therapy that utilizes an adeno-associated virus for the treatment of ambulatory pediatric patients between the ages of 4 and 5 years who have been diagnosed with Duchenne muscular dystrophy (DMD) and possess a confirmed mutation in the DMD gene.

### Regenerative Medicines for Ophthalmology

The growing demand for regenerative medicines in ophthalmology is proving to be a substantial asset to the global regenerative medicine market. The surge is primarily attributed to the prevalence of ocular conditions like age-related macular degeneration, corneal diseases, and retinal disorders, which can result in vision impairments or blindness. Regenerative medicines present effective solutions by applying stem cells, gene therapies, and tissue engineering to rectify damaged eye tissues and rejuvenate vision. With the aging population continually increasing, the request for these cutting-edge treatments in the ophthalmology is growing rapidly, actively contributing to the overall expansion of the global regenerative medicine market and instilling optimism for enhanced eye health and visual outcomes.

In August 2023, ViGeneron GmbH disclosed that the European Medicines Agency (EMA) had granted its clinical trial application (CTA) approval for the novel gene therapy, VG901. ViGeneron reports that VG901 utilizes an adeno-associated virus (AAV) vector to treat CNGA1-associated retinitis pigmentosa (RP).

### Future Market Scenario

The global regenerative medicine market is expected to grow rapidly due to the convergence of multiple influential factors. Primarily, the increasing global aging demographic has led to a higher incidence of chronic illnesses, degenerative ailments, and tissue damage, thereby creating a demand for advanced regenerative therapies. Additionally, breakthroughs in fields such as stem cell research, gene therapy, and tissue engineering have broadened the horizons of regenerative medicine, enhancing the effectiveness and versatility of treatments.

Furthermore, government support and the recognition by regulatory agencies of regenerative medicine's potential have resulted in the establishment of guidelines and pathways for product development and approval. It has instilled greater confidence in investors and expedited research efforts. Collaborative ventures involving pharmaceutical companies, research institutions, and biotechnology firms are expected to spur the innovation ahead.

#### Key Players Landscape and Outlook

Companies are progressively establishing strategic partnerships and distribution agreements, which are pivotal in propelling the global regenerative medicine market's expansion. These alliances empower firms to harness each other's strengths, gain access to new markets, and pool resources for research and development endeavors. Distribution agreements enable companies to broaden their market presence and enhance the accessibility of regenerative medicine treatments to a wider patient demographic. These collaborative initiatives promote innovation, expedite product development, and, in the end, contribute to the enduring and robust growth of the regenerative medicine market.

In August 2023, Marrow Access Technologies unveiled a distribution agreement with Spartan Medical. The agreement is set to grant patients in the Department of Veterans Affairs (VA) and Department of Defense (DoD) access to the SmartShot Marrow Access Device. The innovative device offers a unique solution, harnessing the body's inherent stem cells and regenerative potential to address orthopedic soft tissue injuries affecting areas like the knee, hip, shoulder, foot, and ankle.

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\*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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