

# Gene Therapy Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 - 2032

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## Abstracts

The Global Gene Therapy Market was valued at USD 9 billion in 2024 and is estimated to grow at a CAGR of 19.4% to reach USD 51.3 billion by 2034.

This significant growth trajectory is being fueled by advances in gene delivery systems, rising investments in gene therapy development, the growing prevalence of diseases targeted by gene therapy, such as cancer and rare genetic disorders, and an increasing number of regulatory product approvals. Expanding access to contract manufacturing for gene and cell therapies, along with strategic developments in delivery technology, are further enhancing the market outlook. Regulatory agencies are streamlining approval processes for promising gene therapies, and governments are boosting funding toward innovative genetic medicine platforms. As healthcare systems focus on personalized and targeted treatments, gene therapy is gaining traction for its potential to address complex diseases at the molecular level. Market players are also leveraging digital platforms to share data, accelerate clinical trials, and optimize drug discovery pipelines. Meanwhile, broader integration of precision medicine and bioinformatics is helping gene therapies achieve better treatment efficacy, reduced side effects, and long-term therapeutic benefits. These trends are positioning gene therapy as a disruptive force in the next phase of modern medicine.

In 2024, the viral vectors segment held an 85.1% share, underscoring their continued dominance as the most effective delivery vehicles. These vectors, including adeno-associated viruses and lentiviruses, are widely used due to their superior ability to deliver genetic material accurately and maintain consistent gene expression over time. Their broad clinical application and proven success in approved treatments have reinforced their commercial viability, making them a cornerstone of gene therapy development. Robust manufacturing protocols and scalable production also support

their widespread deployment across therapeutic pipelines.

The in vivo gene therapy segment accounted for USD 5.8 billion in 2024, owing to its systemic approach to treating complex and multi-organ diseases. In vivo methods enable direct gene delivery into the body, eliminating the need for cell extraction and reinfusion. This method supports broader therapeutic access and reduces procedural complexity. Advances in non-viral and hybrid delivery systems—such as nanoparticles and lipid-based formulations are further enhancing targeting precision and treatment outcomes.

North America Gene Therapy Market held a 51.2% share in 2024, making it the dominant region for gene therapy innovation and commercialization. This leadership is supported by a robust investment environment, favorable regulatory frameworks, and a sophisticated healthcare infrastructure. With leading biotech firms, prominent academic institutions, and high R&D activity, the region, particularly the U.S., continues to push the boundaries of gene therapy science. Strong public-private collaborations and a deep talent pool are accelerating clinical development and commercial adoption of cutting-edge therapies.

Prominent players in the Global Gene Therapy Market include Sangamo Therapeutics, Amgen, Spark Therapeutics (Roche), Beam Therapeutics, Krystal Biotech, Sarepta Therapeutics, AGTC, Orchard Therapeutics, bluebird bio, Bristol-Myers Squibb Company, Gilead Sciences, Novartis, Helixmith, Pfizer, Intellia Therapeutics, Bayer, UniQure N.V., BioMarin Pharmaceutical, CRISPR Therapeutics, and Audentes Therapeutics (Astellas Pharma). To strengthen their foothold, leading companies in the gene therapy sector are prioritizing strategic mergers and acquisitions to enhance their technology platforms and expand product pipelines. Many firms are entering collaborative R&D partnerships with academic institutions and smaller biotech innovators to access novel therapies and accelerate clinical timelines. Increasing investment in in-house manufacturing capabilities and global supply chain infrastructure ensures faster scaling and regulatory compliance. Companies are also intensifying their focus on securing fast-track, orphan drug, and breakthrough therapy designations to reduce time-to-market.

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