

Genetic Modification Therapies Clinical Applications: Gene Therapies, Genetically Modified Cell Therapies, RNA Therapies and Gene Editing

Market Research Report | 2025-12-30 | 166 pages | BCC Research

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Report description:

Description

Report Scope

The report provides an overview of genetic modification therapies clinical applications: gene therapies, genetically modified cell therapies, RNA therapies and gene editing market and analyzes market trends. It includes global revenue (\$ million) for the base year 2024, estimated data for 2025 and forecast data from 2026 through 2030. In this report, the market is segmented based on platform technology, application and region.

Based on platform technology, the market is segmented into gene editing, gene therapy, gene-modified cell therapy and RNA therapy platforms. The application segment covers oncology, rare diseases, cardiovascular diseases, musculoskeletal conditions, hematological disorders and other applications. The gene therapy segment is segmented based on the delivery systems into adeno-associated virus (AAV), herpes simplex virus (HSV)-1, lentivirus and others. The RNA therapy segment is segmented into antisense oligonucleotides, small interfering RNAs and others based on type.

The report also focuses on the regional segmentation of the market. The regions covered in this study include North America, Europe, Asia-Pacific, and the Rest of the World, with a focus on major countries in these regions.

The report also includes major driving trends and restraints that affect the market and vendor landscape. It analyzes environmental, social and corporate governance (ESG) developments, discussing pipeline activities and emerging technologies related to the market. The report concludes with an analysis of the competitive landscape and industry structure. It also has a dedicated section of company profiles that covers details of leading companies. The report does not include mRNA vaccines.

Report Includes

- 103 data tables and 63 additional tables
- Overview and an analysis of the global market for clinical applications of genetic modification therapies

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- In-depth analysis of global market trends, featuring historical revenue data for 2022-2024, estimated figures for 2025, as well as forecasts for 2030. This analysis includes projections of compound annual growth rates (CAGRs) through 2030
- Evaluation of the current market size and revenue growth prospects specific to the genetic modification therapies, accompanied by a market share analysis by platform technology, application and region
- Analysis of current and future demand in the genetic modification therapies, along with a detailed analysis of the competitive environment, market regulations and reimbursement practices
- Review of gene editing, gene therapy, CAR T-cell therapy, RNA therapy and lentiviral production, and discussion of how they are playing a key role in genetic modification therapies
- Analysis of drivers, challenges and opportunities affecting market growth
- Coverage of evolving technologies, the current and future market potential, R&D activities, growth strategies, new product pipeline, regulatory framework and reimbursement scenarios, and ESG trends of the market
- Market share analysis of the key market participants of the industry, along with their research priorities, product portfolios, global rankings and competitive landscape
- Profiles of the leading companies, including Gilead Sciences Inc., Alnylam Pharmaceuticals Inc., Novartis AG, Bristol-Myers Squibb Co., and Sarepta Therapeutics Inc.

Executive Summary

Summary:

The global market for genetic modification therapies is estimated to grow from \$14.8 billion in 2025 to reach \$32.1 billion by the end of 2030, at a compound annual growth rate (CAGR) of 16.8% from 2025 through 2030.

Genetic modification therapies are next-generation biologic therapies developed on the basis of the alteration of genetic material. Each platform technology in gene modification therapy, including gene therapy or RNA therapy, has significant potential in the coming years. These therapies are developed for debilitating conditions with limited treatment options, making them specialized. Products based on gene therapy are often developed as one-time treatments for rare, inherited conditions. The industry has a robust clinical pipeline, and many biopharmaceutical companies are entering the field. Currently, these therapies are available for rare diseases, cancer and hematological conditions. However, the industry may witness the approval of products for other application areas, such as musculoskeletal, cardiovascular and neurological conditions.

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ALNYLAM PHARMACEUTICALS INC.

AMGEN INC.

BIOGEN

BRISTOL-MYERS SQUIBB CO.

F. HOFFMANN-LA ROCHE LTD.

FERRING

GENETIX BIOTHERAPEUTICS INC.

GILEAD SCIENCES INC.

JOHNSON & JOHNSON

LILLY USA LLC.

NOVARTIS AG

NOVO NORDISK A/S

SANOFI

SAREPTA THERAPEUTICS INC.

VERTEX PHARMACEUTICALS INC.

Emerging Startups/Market Disruptors

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