

Genome Engineering Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, 2017-2027 Segmented By Technology (CRISPR, TALEN, ZFN, Antisense, Others), By Delivery Method (Ex-Vivo v/s In-Vivo), By Application (Cell Line Engineering, Genetic Engineering, Diagnostic Applications, Drug Discovery & Development, Others), By End User (Pharmaceutical & Biotechnology Companies, Academic & Research Institutions, Others), By Region

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Abstracts

The global genome engineering market is anticipated to witness an impressive growth during the forecast period. Genome engineering is a process that allows for the insertion, deletion, modification, or replacement of DNA in a living organism's genome. As a result of this, the technique can be used for development of new therapies, treatment and drugs for different therapeutic areas especially the chronic diseases. Various academic & research institutions and biotechnology & pharmaceutical companies are focusing and using this technology for development of novel therapies. For instance, Synthego Corporation introduced the Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) Pioneers Program in October 2017. Using this Clustered Regularly Interspaced Short Palindromic Repeats, researchers are focusing on discovering cures for cancer and other disease areas.

Increasing Development of Novel Technologies

Various companies and academic & research institutions are using genome engineering technique for the development of new therapies and treatment. This is not only helping

them improvise their status but also improving the market positioning of various companies and helping them have an edge over other players operating in the market. For instance, Sangamo Therapeutics, Inc.'s SB-FIX, a zinc finger nuclease (ZFN)-mediated in vivo genome editing treatment for hemophilia B, received clinical trial authorization (CTA) from the U.K.'s Medicines and Healthcare Products Regulatory Agency (MHRA) in February 2018. Similarly, the first Cas9 enzyme variation, which reduces the off-target effects in CRISPR genome editing, was introduced in 2017 by Integrated DNA Technologies, Inc. This represented a significant step towards the therapeutic application of CRISPR.

Increasing Funding and Investments for Research and Development

The increasing funding and investments in the study and development of new genetic engineering technologies is expected to create lucrative opportunities for the growth of genome engineering market in the coming years. For instance, the United States National Institutes of Health (NIH) stated in January 2018 that it would be supporting genome editing research through its new program called Somatic Cell Genome Editing. Under this program grants will be provided to researchers across Canada and United States to conduct research related to genome editing.

Growing Application Areas of Genomics

The applications of genomics have significantly increased over the years across different fields including forensics, genetic disorders, drug discovery, agriculture among others. The advent of Next Generation sequencing has increased the application of genomics across the fields of forensics. Future trends in genome engineering includes its application in the field of nutraceuticals, marine engineering among others. Personalized nutrition and precision medicine are another field wherein the demand for genome engineering is expected to increase. A lot of research and clinical trials are being conducted across different parts of the globe to identify more areas wherein genomic engineering is used. This in turn will create lucrative opportunities for the growth of global genomic engineering market over the next few years.

Market Segmentation

The Global Genome Engineering market is segmented into by technology, by delivery method, by application, by end user, by region. Based on technology, the market can be categorized into CRISPR, TALEN, ZFN, Antisense, Others. Based on delivery method, the market is divided into Ex-Vivo v/s In-Vivo. Based on application, the market can be

fragmented into Cell Line Engineering, Genetic Engineering, Diagnostic Applications, Drug Discovery & Development, Others. Based on by end user, the market can be segmented into Pharmaceutical & Biotechnology Companies, Academic & Research Institutions, Others. Regionally, North America dominated the market among Europe, Asia Pacific, South America and Middle East & Africa. United States holds the largest market among all the countries across the globe. This can be ascribed to the increasing research & development expenditure in the country for development of new therapies and treatment. In 2021, the Federal Funds allocation for research and development in United States was around USD185.41 billion.

Market Players

Merck KGaA, Sangamo Therapeutics, Inc., Genscript Biotech Corp, CRISPR Therapeutics AG, Editas Medicine, Inc., Precision BioSciences, Inc., Horizon Discovery Group plc, Lonza Group Ltd., OriGene Technologies, Inc., Transposagen Biopharmaceuticals, Inc. are the leading players operating in the Global Genome Engineering Market. Various companies operating in the market are focusing on research & development activities for development of therapies or drugs using genomic engineering. For instance, in October 2021, Merck KGaA licensed its patented CRISPR-Cas9 technology Cellalecta for the development of next-generation treatments. The technology has helped researchers and scientists across the globe in advancing treatments for the different forms of cancer, blood related genetic disorders, among others.

Report Scope:

In this report, Global Genome Engineering market has been segmented into following categories, in addition to the industry trends which have also been detailed below:

Genome Engineering Market, By Technology:

CRISPR

TALEN

ZFN

Antisense

Others

Genome Engineering Market, By Delivery Method:

Ex-Vivo

In-Vivo

Genome Engineering Market, By Application:

Cell Line Engineering

Genetic Engineering

Diagnostic Applications

Drug Discovery & Development

Others

Genome Engineering Market, By End User:

Pharmaceutical & Biotechnology Companies

Academic & Research Institutions

Others

Genome Engineering Market, By Region:

North America

United States

Canada

Mexico

Europe

Germany

France

United Kingdom

Spain

Italy

Asia-Pacific

China

India

Japan

South Korea

Australia

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in Global Genome Engineering market.

Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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