

Glycobiology: Global Markets for Diagnostics and Therapeutics

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Report description:

Description

Report Scope:

The current report will provide an in-depth look at the glycobiology market. This report analyzes glycobiology market trends with data from 2021, estimates for 2022, projections of compound annual growth rates through 2027 (forecast period of 2022 to 2027), and regional market data. This report will highlight the current and future market potential of glycobiology along with providing a detailed analysis of the competitive environment. Regulatory scenarios, drivers, restraints, and opportunities will be covered in the current report. The report also covers market projections for 2027 and indicates the market share for key market players.

The scope of the market in this report is segmented into glycobiology segment and region. The segments of glycobiology are: glycobiology therapeutics, glycobiology diagnostics, and glycobiology reagents and tools. The regional markets are North America, Europe, Asia-Pacific, and other world regions (Rest of the World). Detailed analysis of major countries such as the U.S., Germany, the U.K., Italy, France, Japan, China, and India will be covered within their respective regional segments. For market estimates, data will be provided for 2021 as the base year, with forecasts for 2022 and 2027.

Report Includes:

- 51 tables
- An up-to-date overview and analysis of the global markets for glycobiology diagnostics and therapeutics
- Analyses of the global market trends, with historic revenue data from 2019 to 2021, estimates for 2022, and projections of compound annual growth rates (CAGRs) through 2027
- Highlights of the market potential for glycobiology market, industry growth drivers, and areas of focus to forecast this market into various segments and subsegments

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- Estimation of the actual market size and revenue forecast for global glycobiology market in USD million terms, and corresponding market share analysis by major market segments and region
- A look at new tools for synthesizing, modifying and studying oligosaccharides and glycoconjugates
- Evaluation of promising candidates for carbohydrate-based diagnostics, drugs and vaccines
- Insight into how glycobiology offers enormous untapped potential in the discovery of new therapeutics derived from saccharides or other molecules which target the biosynthesis and function of saccharides
- Identification of leading biotechnology companies poised to introduce products during the forecast period, and their impact on the face of the competitive environment
- Insight into recent industry structure for glycobiology diagnostics and therapeutics, current competitive scenario, clinical trials, ongoing research (R&D) activities, strategic alliances, and COVID-19 impact on the progress of this market
- Profile descriptions of the major market players, including Agilent Technologies Inc., Bio-Techne, Merck KGaA, Takara Bio Inc. and Waters Corp.

Executive Summary

Summary:

Glycobiology is defined as the branch of biology concerned with the study of the structure, biosynthesis, and function of saccharides (sugar chains), which may exist purely or conjugated to other biological molecules to form glycoconjugates. Importantly, the study of such molecules is technically challenging as no sequencing tool, such as that used in proteomics or genomics, is available. However, following on from genomics and proteomics, there is increasing recognition of the importance of carbohydrate-based molecules in basic cellular processes. This has resulted in more extensive glycomics research focused on glycosylation of therapeutic proteins, glycosylation patterns in cell recognition, cellular glycoprofiling studies in cancer and other diseases, and improved chemical analysis and synthesis of carbohydrate molecules.

Glycobiology offers huge untapped potential for the discovery of new therapeutics originated from saccharides or other molecules that target the biosynthesis and function of saccharides. Saccharides offer a range of potential chemical varieties that is orders of magnitude greater than what their protein and nucleic acid counterparts can provide. In addition, saccharides have multiple functions that make them relevant to most areas of biological research. The central role of saccharides in cellular interactions means that novel oligosaccharides are of value in R&D programs addressing a wide range of therapeutic areas, including inflammation, immunity, oncology, neurodegenerative disease, infection, and others.

However, the market for carbohydrate-based drugs is still in a relatively early stage of development. In addition to "monosaccharide-inspired" drugs such as Roche's influenza treatment Tamiflu (oseltamivir), two blockbuster drugs, Bayer's Glucobay (acarbose) and heparin, stand out. Heparin is a key example of a major carbohydrate-based molecule that has been developed for medical use in anticoagulant therapy.

Because of their essential function in many cellular processes, carbohydrates are also important biomarkers in diagnostic assay development. Several biotech companies are focusing on glycobiology approaches for further detection of various pathologies, including cancer and neurodegeneration. Major market players in glycobiology include ThermoFisher Scientific Inc., Agilent Technologies Inc., Bio-Techne, Merck KGaA, Takara Bio Inc., and Waters Corp. There are many other emerging and niche market players establishing their position in the market that stand out and that offer high-quality glycobiology products. All the market players are actively engaged in R&D of glycans to offer a strong product portfolio.

The global market for glycobiology was valued at REDACTED in 2021. The market is expected to grow at a compound annual growth rate (CAGR) of REDACTED to reach over REDACTED by the end of 2027. Market growth is attributed to factors such as

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technological advancements in the analysis of glycans, rising prevalence of chronic disorders globally, and increasing R&D investment by pharma companies. The global market for glycobiology is categorized into segments and regions.

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TAKARA BIO INC.
THERMO FISHER SCIENTIFIC INC.
WATERS CORP.
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