

Pharmacogenomics Technologies Market Forecasts to 2034 – Global Analysis By Type (Bioinformatics Software, Clinical Decision Support System, Laboratory Information Management System, Pharmacogenomic Consulting, Genetic Testing Services, Sample Preparation Kits and Other Types), Therapeutic Area, Technology, Distribution Channel, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Pharmacogenomics Technologies Market is accounted for \$9.2 billion in 2026 and is expected to reach \$20.8 billion by 2034 growing at a CAGR of 10.7% during the forecast period. Pharmacogenomics technologies refer to a field that combines pharmacology and genomics to develop personalized medicine based on an individual's genetic makeup. These technologies involve analyzing how an individual's genetic variations influence their response to medications. By understanding these genetic variations, healthcare providers can better predict how a person will respond to a particular drug, determine the most effective dosage, and minimize the risk of adverse reactions.

According to the American Cancer Society 2022 report, an estimated 1.9 million new cancer cases will be diagnosed in the United States in 2022, which includes 290,560 cases of breast cancer.

Market Dynamics:

Driver:

Advancements in genomic technologies

Progress in genomic sequencing and analysis technologies has significantly contributed to the expansion of market. Next-generation sequencing (NGS), microarray analysis, and bioinformatics tools enable more comprehensive analysis of genetic variations related to drug response. These innovations enhance precision medicine, minimizing trial and error in prescribing medications and improving patient outcomes.

Restraint:

Data interpretation challenges

Analyzing genetic data is complex. Interpreting the results in a clinically actionable way can be challenging, especially given the vast amount of genetic information involved. Understanding the implications of specific genetic variations and their impact on drug response requires sophisticated analysis. Ensuring the security and confidentiality of patient genetic information is critical but can be difficult to guarantee. These are the factors impeding the growth of the market.

Opportunity:

Increasing demand for personalized medicine

Pharmacogenomics technologies meet the rising demand for personalized medicine by tailoring treatments based on individual genetic profiles. This approach enhances drug efficacy, minimizes adverse reactions, and optimizes dosages for patients. There's a growing recognition of the importance of personalized medicine, which tailors treatments based on individual genetic profiles. It facilitates the customization of drug therapies to maximize efficacy and minimize adverse reactions.

Threat:

Regulatory and reimbursement challenges

Regulatory frameworks may not be fully equipped to handle pharmacogenomics, leading to uncertainties about standards and guidelines. Additionally, reimbursement for genetic testing and related services might not be universally available or standardized, limiting access for some patients. Sequencing, analyzing, and interpreting genetic data

require specialized equipment and expertise, making the process costly. This expense can limit widespread adoption and accessibility.

Covid-19 Impact:

The pandemic has accelerated research in pharmacogenomics, emphasizing the importance of personalized medicine. Understanding how genetic factors influence drug response became crucial in developing treatments and vaccines for COVID-19. The shift towards telemedicine during the pandemic affected the way genetic testing and counseling was delivered. There's an increased use of telehealth services for genetic testing and consultations, allowing wider accessibility and minimizing in-person interactions.

The oncology segment is expected to be the largest during the forecast period

The oncology segment is expected to be the largest during the forecast period. Advantages include personalized therapy selection, minimizing adverse reactions, optimizing drug efficacy, and predicting patient response. This precision approach enhances treatment outcomes, reduces trial and error, and improves patient quality of life by matching therapies to individual genetic profiles, advancing oncology towards more effective and personalized care.

The hospitals segment is expected to have the highest CAGR during the forecast period

The hospitals segment is expected to have the highest CAGR during the forecast period. This precision medicine approach minimizes adverse reactions, enhances drug efficacy, and optimizes dosage. It reduces trial-and-error prescribing, improving patient outcomes while minimizing healthcare costs. Hospitals employing these technologies benefit from personalized treatment plans, reduced side effects, and streamlined medication strategies, ensuring safer and more effective care for patients.

Region with largest share:

North America is projected to hold the largest market share during the forecast period. The development of high-throughput sequencing techniques has made it more feasible and cost-effective to analyze an individual's genetic information. This has enabled the widespread application of pharmacogenomics in clinical settings. There's a growing recognition of the importance of tailoring medical treatments to an individual's genetic profile to enhance drug efficacy and minimize adverse reactions.

Region with highest CAGR:

Asia Pacific is projected to hold the highest CAGR over the forecast period due to various factors such as increasing investments in healthcare infrastructure. The market involves various technologies such as DNA sequencing, microarray technology, polymerase chain reaction (PCR), and bioinformatics tools, among others, which are used to analyze genetic variations and aid in drug development, prescription, and dosage determination customized to an individual's genetic profile.

Key players in the market

Some of the key players in Pharmacogenomics Technologies market include Phamatech Inc, BiogeniQ Inc., CENTOGENE N.V., Empire Genomics, ViennaLab Diagnostics GmbH, Thermo Fisher Scientific, Admera Health, Agena Biosciences Inc., Myriad Genetics Inc., Quest Diagnostics, Dynamic DNA Laboratories, Personalis Inc., Coriell Life Sciences, Illumina Inc, OneOme LLC, QIAGEN and Leica Biosystems.

Key Developments:

In April 2023, Leica Biosystems received the clearance for BOND MMR Antibody Panel, which is expected to aid customers by offering the IHC Mismatch Repair (MMR) option when screening patients with colorectal cancer who may have Lynch syndrome.

In January 2023, QIAGEN announced a strategic partnership with Helix a population genomics company to aid companion diagnostics for genetic diseases.

Types Covered:

Bioinformatics Software

Clinical Decision Support System

Laboratory Information Management System

Pharmacogenomic Consulting

Genetic Testing Services

Sample Preparation Kits

Other Types

Therapeutic Areas Covered:

Neurological Disorders

Oncology

Immunological Disorders

Cardiovascular Disease

Infectious Diseases

Other Therapeutic Areas

Technologies Covered:

Sequencing

Immunohistochemistry

In-situ Hybridization

Polymerase Chain Reaction (PCR)

Other Technologies

Distribution Channels Covered:

Retail Pharmacy

Hospital Pharmacy

Online Pharmacy

End Users Covered:

Hospitals

Clinics

Research Institute

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

Pharmacogenomics Technologies Market Forecasts to 2034 – Global Analysis By Type (Bioinformatics Software, Cli...

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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