

Omics-Based Clinical Trials Market to Grow at 8.6% CAGR from 2025-2029

The Business Research Company's Omics-Based Clinical Trials Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034

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/EINPresswire.com/ -- What Is The [Omics-Based Clinical Trials Market Size](#) And Growth?



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In recent times, the omics-based clinical trials market size has seen substantial growth. Estimated to rise from \$29.10 billion in 2024 to \$31.71 billion in 2025, the market is projected to grow at a compound annual growth rate (CAGR) of 8.9%.

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This growth in the historical period can be linked to several factors such as the increasing number of omics technology-based clinical trials, a greater focus on translational research, enhanced government support and funding, expanded availability of biobanks and biospecimens, and a heightened awareness of the advantages of precision therapies.

The market size of clinical trials based on omics is predicted to experience significant growth in the upcoming

years. The projected growth would be to \$44.08 billion by 2029, with a compound annual growth rate (CAGR) of 8.6%. Factors influencing this growth during the forecast period include an increased demand for personalized medication, a rise in multi-omics approaches' application, growing instances of chronic and rare illnesses, increased funding in genomic studies and biotechnology, and an intensified focus on biomarker discovery. Key trends for the forecast period include improvements in Next Generation Sequencing (NGS) techniques, the amalgamation of AI with omics systems, technological progress in bioinformatics instruments, advanced in proteomics and metabolomics platforms, and the synthesis of multi-omics data.

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What Are The Current Leading Growth Drivers For Omics-Based Clinical Trials Market?

The surge in the want for personalized medicine is predicted to help stimulate the omics-based clinical trials market's expansion in the future. Personalized medicine is a medical procedure that customizes disease prevention, diagnosis, and treatments to each patient's specific traits. The call for personalized medicine is gaining momentum due to the advancements in genomic technologies that allow for a swift, affordable examination of singular genetic profiles to direct targeted therapies. Omics-based clinical trials back up personalized medicine by facilitating the recognition of unique genetic, proteomic, and metabolic profiles. This then allows for more precise and impactful treatment methodologies designed around each patient. For example, as reported by the Personalized Medicine Coalition, a professional membership organization based in the US, in February 2023, the sanction of 12 new personalized medicines accounted for around 34% of all new therapy approvals in 2022. This showcases a significant growth when compared to the prior years. Consequently, the escalating demand for personalized medicine is propelling the growth of the omics-based clinical trials market.

Which Companies Are Currently Leading In The Omics-Based Clinical Trials Market?

Major players in the Omics-Based Clinical Trials Global Market Report 2025 include:

- Pfizer Inc.
- F. Hoffmann-La Roche Ltd.
- Thermo Fisher Scientific Inc.
- GlaxoSmithKline Plc
- Eli Lilly and Company
- Novo Nordisk A/S
- BioNTech SE
- IQVIA Inc.
- Laboratory Corporation of America Holdings
- ICON Public Limited Company

What Are The Prominent Trends In The Omics-Based Clinical Trials Market?

Firms in the omics-based clinical trials industry are emphasizing innovative strategies such as HiFi sequencing technology, which are aimed at optimizing the accuracy, pace, and intricacy of multi-omics data analysis, thus enhancing trial outcomes and personalized treatment approaches. HiFi sequencing is a type of next-generation sequencing (NGS) that provides long, highly precise readings through circular consensus sequencing (CCS), allowing for in-depth and accurate analysis of genomes, transcriptomes, and epigenomes. For example, the US biotechnology company, Pacific Biosciences of California Inc., along with the Singapore-based Agency for Science, Technology, and Research (A*STAR) and South Korean biotech firm Macrogen Inc., inaugurated a cutting-edge lab in Singapore in October 2024, equipped with advanced long-read sequencing technology to spur genomics innovation. The facility gives researchers the tools to perform high-precision, rapid genomic studies and supports a broad array of applications,

such as whole genome sequencing, transcriptomics, epigenetics, and metagenomics. It also encourages cooperation between global scientists and local institutions, with the goal of accelerating advancements in personalized medicine, diagnosis of rare diseases, and precision oncology. Furthermore, it provides training programs and open access to powerful sequencing infrastructure, supporting capacity building and innovation across the Asia-Pacific region.

How Is The Omics-Based Clinical Trials Market Segmented?

The omics-based clinical trials market covered in this report is segmented

- 1) By Type: Genomics, Proteomics, Metabolomics, Transcriptomics
- 2) By Phase: Phase I, Phase II, Phase III, Phase IV
- 3) By Study Design: Interventional Studies, Observational Studies, Expanded Access Studies
- 4) By Application: Oncology, Cardiovascular, Neurology, Infectious Diseases, Metabolic Disorders
- 5) By End-User: Pharmaceutical And Biotechnology Companies, Academic And Research Institutes, Contract Research Organizations (CROs), Hospitals And Diagnostic Laboratories

Subsegments:

- 1) By Genomics: Whole Genome Sequencing, Whole Exome Sequencing, Targeted Gene Sequencing
- 2) By Proteomics: Protein Expression Profiling, Post-Translational Modifications Analysis, Protein-Protein Interaction Mapping
- 3) By Metabolomics: Targeted Metabolomics, Untargeted Metabolomics, Metabolic Flux Analysis
- 4) By Transcriptomics: Microarray Analysis, Single-Cell Transcriptomics, Gene Expression Profiling

View the full omics-based clinical trials market report:

<https://www.thebusinessresearchcompany.com/report/omics-based-clinical-trials-global-market-report>

Which Is The Dominating Region For The Omics-Based Clinical Trials Market?

In the Omics-Based Clinical Trials Global Market Report 2025, North America emerged as the leading region for the year 2024. It is anticipated that the Asia-Pacific region will witness the fastest growth in the forecast period. The report encompasses an analysis of various regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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