

## **Global Next-Generation Sequencing on Drug Development Market**

Market Research Report | 2023-08-29 | 177 pages | BCC Research

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### **Report description:**

Description

Report Scope:

The scope of this report includes NGS technologies, applications, industries, initiatives, patents and companies. The markets for NGS in drug development are given for 2020, 2021, 2022, 2023 and 2028.

This report reviews the NGS technologies and explains why NGS is important in drug development. It then discusses some of the significant research initiatives that impact NGS. The main market-driving forces are also discussed.

This report examines the markets by product type, end user and region. This report provides market data and forecasts for NGS by product type, including instruments, consumables and services for drug development.

Specific geographic markets are discussed, including North America, Europe, Asia-Pacific and the Rest of the World.

BCC Research summarizes the main industry acquisitions and strategic alliances from Jan. 2020, through Dec. 2022, including key alliance trends.

Report Includes:

- 52 data tables and 39 additional tables
- An overview of the global markets for next-generation sequencing on drug development
- Estimation of market size and analyses of global market trends, with data from 2020-2022, estimates for 2023, and projections of compound annual growth rates (CAGRs) through 2028

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- Highlights of the market potential and characterization of next-generation sequencing on drug development market by product, service, end-user type, and region
- Examination of the key drivers and constraints that will shape the market for next-generation sequencing on drug development and discussion on the upcoming market opportunities and areas of focus to forecast the market into various segments and subsegments
- Coverage of recent advances, emerging technologies, and developments of the industry
- Evaluation of key industry acquisitions and strategic alliances and market share analysis of the leading suppliers of the industry
- Profiles of the key companies of the industry, including 10x Genomics, Bio-Rad Laboratories Inc., Oxford Nanopore Technologies, Qiagen and Takara Bio Inc.

## Executive Summary

### Summary:

Next generation sequencing (NGS) is based on the concept of massive parallel sequencing that produces very large numbers of relatively small reads. NGS techniques revolutionized genetic research and filled a gap in everyday research tools to address complex genomic research questions. This essential tool in many research fields (de-novo genome sequencing, comparative genomics or gene expression and gene regulation studies) is driving discovery and enabling the future of personalized medicine.

NGS in drug discovery and development is focused on target identification and genetically stratified clinical trials. The wealth of human genetic information can be leveraged to identify drug targets, validate therapeutic hypotheses and predict the potential safety of inhibitory compounds aimed at molecular targets. NGS has the potential to uncover many mutations associated with genetic diseases and to identify target genes for future drug development endeavors.

Adoption of technologies will expand understanding of the genetic basis of human disease, help identify novel compounds or reuse existing compounds, increase drug efficacy, reduce adverse reactions and ultimately facilitate personalized therapies. Currently, the pharmaceutical industry is performing population scale NGS analysis to discover new knowledge about human diseases, with focused NGS analysis on clinical trials to identify biomarkers for drug efficacy or safety. In the near future, NGS may bring new marketed compounds. More genetically stratified clinical trials could be conducted to recruit specific subsets of participants based on genetic profiles and other clinical biomarkers.

The global NGS market in drug development was valued at nearly \$REDACTED billion in 2022. The market is expected to grow at a compound annual growth rate (CAGR) of REDACTED% to reach \$REDACTED billion by 2028. Growth in this market comes from increasing R&D activities using NGS technologies, the rise in technological advancements (especially nanopore sequencing in NGS and discovery applications that require NGS technology) is boosting the growth NGS in the drug development market.

For the purposes of this report, the global market for NGS in drug development is segmented into product type, end user and geography. The NGS market in drug development product types include instruments, consumables and services. Pharmaceutical and biotechnology companies are concentrating on launching novel NGS instruments that are used for drug development. In Oct. 2022, Illumina Inc. launched a strategic research collaboration with AstraZeneca, a global, science-led biopharmaceutical company, to accelerate drug target discovery by connecting strengths in artificial intelligence (AI) based genome interpretation and genomic analysis techniques along with industry expertise. The collaboration will consider whether an integrated framework of these technologies can increase the work and confidence of target discovery to see promising drugs based on human omics insights. Therefore, such innovations and technologically advanced product launches in the NGS market in drug development will likely drive segment growth over the forecast period.

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